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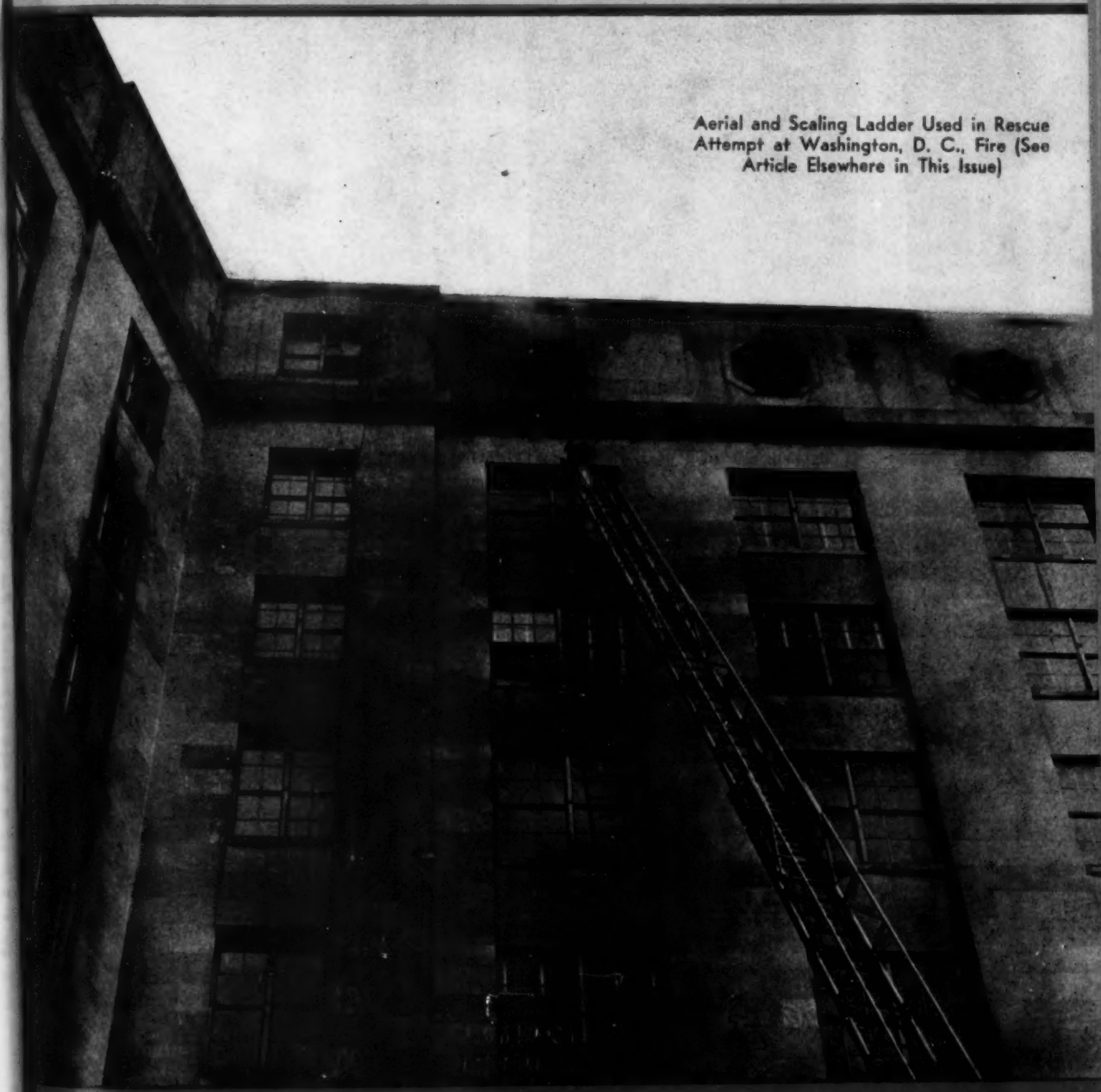
FIRE ENGINEERING

The Journal of the Fire Protection Profession Since 1877

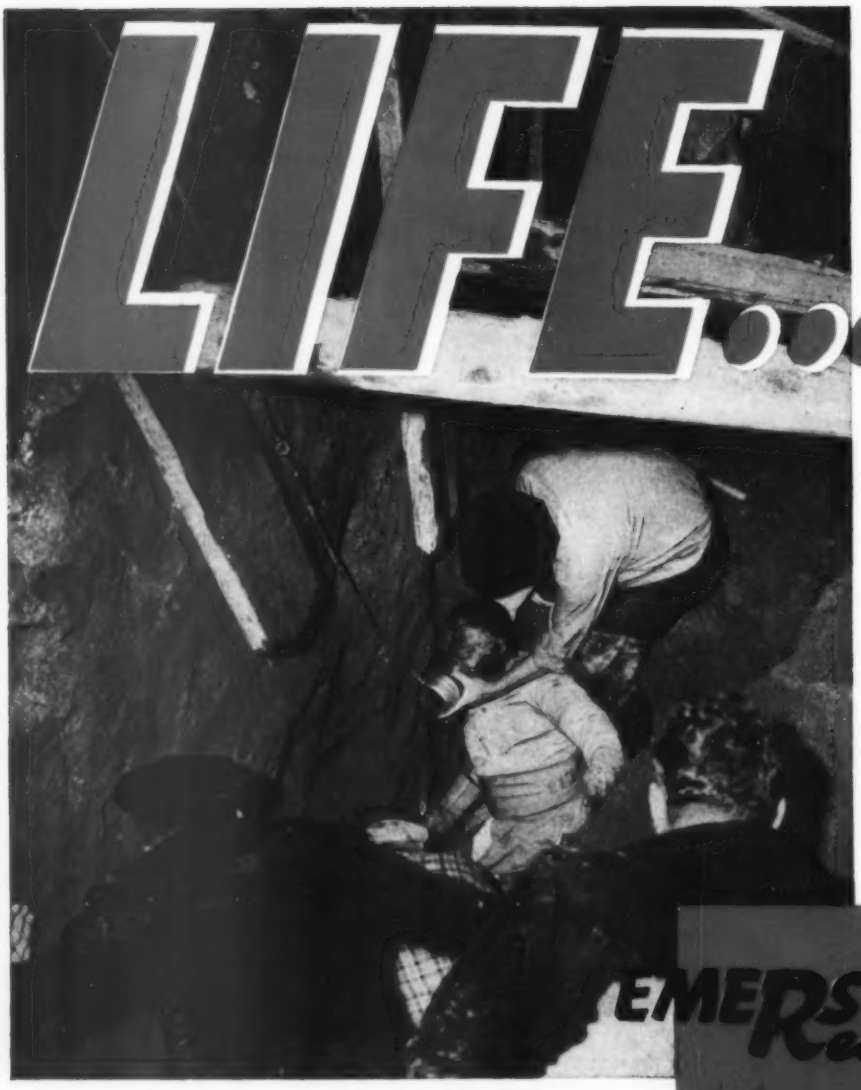
JANUARY, 1950



Aerial and Scaling Ladder Used in Rescue Attempt at Washington, D. C., Fire (See Article Elsewhere in This Issue)

A CASE - SHEPPERD - MANN PUBLICATION

LIFE... Saved by the life line from "old faithful"



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From hundreds of feet away an EMERSON can breathe life into a stricken person's lungs. If the victim is injured, trapped under debris, or in an inaccessible place, you can still bring him the breath of life if you reach his face with one hand holding the *EMERSON* mechanism.

Sections of extension hose can be joined instantaneously, as needed. A length of over 400 feet has been tested to run a cluster of 5 mechanisms at its far end.

The photograph above shows an actual rescue, as reported in the *Philadelphia Inquirer*.

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"Simplest and Safest"

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First choice

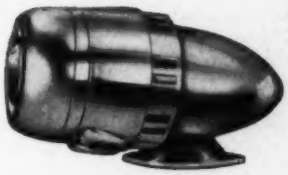
Maxim Motor Co., Middleboro, Mass.

in *Signal* Protection

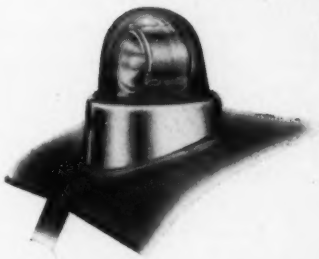
Federal Quality Signals are *first choice* for new equipment. Remember your siren and warning lights are vital points in the protection of your entire vehicle investment. Make Federal *your first choice* and be assured of the ultimate in dependability.

The entire practice in visible signals has recently been revolutionized by the Federal Beacon Ray Light, the spectacular simple warning light giving full protection, front, rear and sides. For one way protection, front or rear, the companion light Federal Propello Ray is still the standard in its field.

Write today for full details on the recent improvement in warning lights and up to date prices on the entire signal line.



C-6 SIREN



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FIRE ENGINEERING

A Consolidation of FIRE AND WATER ENGINEERING, THE FIRE ENGINEER, FIRE PROTECTION *and* FIRE SERVICE

CONTENTS

Vol. 103 January, 1950 No. 1

	Page
With the Editor — By Fred Shepperd	25
Huge Lumber Yard Fire Burns for 30 Hours	26
Washington Fire and Plane Crash Keep Rescue Units Busy	29
Heavy Fire Loss in Dallas as Plane Crash Involves Buildings — A Staff Report	31
Toledo Fire Department Has Smokiest Blaze in 40 Years — A Staff Report	32
Improvement Program Pays Off as Town Develops — By Robert H. Richards	33
Harrisonburg Firemen Train Local Hospital Personnel — A Staff Report	34
Fire Chief Urges Preparedness and Training for Institutions — A Staff Review	36
Short Cuts and Gadgets	41
The Watch Desk — By Roi B. Woolley	42
News of the Manufacturers	43
False Alarms	44
World-Wide Fire News — By Roi B. Woolley	46
The Round Table — The Windowless Building Poses Problems for the Fire Fighter	50
Persons in the News	56
Obituaries	57
Annual Reports Received	58
The Book Shelf	61
Questions and Answers	62
What's Burning?	68

FRED SHEPPERD
Editor

ROI B. WOOLLEY
Assistant Editor

The Big "Little Things"

IT isn't the broken shaft that cripples the most machinery and shuts down the works; it's the little nut on the little bolt that works loose and throws all the rest of the mechanism into a jumble."

—Herbert Kaufman

- How many, many fires "get away" from the fire forces because of some foolish little thing, like not having the right adapter, or a proper nozzle, or a good gas mask when it is needed . . .
- It's better to have *more* fire fighting equipment on hand and ready to go, and *not* need it, than to *need* more equipment when the emergency arises—and *not have it.*
- Tell that to the budget makers and appropriation shavers, you Chiefs, come next Budget Time!
- The advertising and editorial pages of FIRE ENGINEERING are filled with accounts of the tools and equipment the fire fighter needs "against the time of the emergency". There is no excuse for being ignorant of these facilities if you read, reread and refer to "The Journal of the Fire Protection Profession, Since 1877."

The Publishers

FIRE ENGINEERING

The Journal of the Fire Profession since 1877; published on the fifteenth of each month by Case-Shepperd-Mann Publishing Corp., 24 West 40th St., New York 18, N. Y., also publishers of *Water Works Engineering, Sewage and Industrial Wastes Engineering,* etc. ¶Subscription price: U. S., Latin America and Canada, $3.00 a year; Foreign, $4.00; Single copies, 35c. ¶Member of Audit Bureau of Circulations and Associated Business Papers, Inc. ¶Entered as second class matter April 15, 1929, at the Post Office at New York, N. Y., under Act of March 3, 1879.

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THE GIFT PEOPLE ARE PROUD TO GIVE TO THEMSELVES

In hundreds of big and little communities from coast to coast thoughtful citizens have given themselves the gift of E & J Resuscitator protection by conducting fund-raising programs and then donating E & J Resuscitators to the local Fire Department.

It happens every time the citizens of a community learn how much the modern E & J Resuscitator increases the probability of successful life-saving treatment in all asphyxiation cases. Right away they want to make certain *they* will not be caught without E & J Resuscitators readily available for newborn infants and for cases of drowning, gas poisoning, electric shock, heart failure, suffocation, injury, etc.

If your community is not yet adequately equipped, it is up to you to let your community leaders know the life-saving value of E & J Resuscitators. Give them complete descriptive literature telling what they are, what they do, the many ways they are used and how they operate. This literature is yours for the asking, plus complete details on the popular E & J fund-raising plan used successfully by many communities. Getting the literature is the first step. Take it right now, while you're thinking of it, by writing to E & J, Dept. K-12, at the address below. No obligation, of course.

The E & J Resuscitator is accepted by the Council on Physical Medicine, American Medical Association

E & J MANUFACTURING CO.
Glendale 1, California

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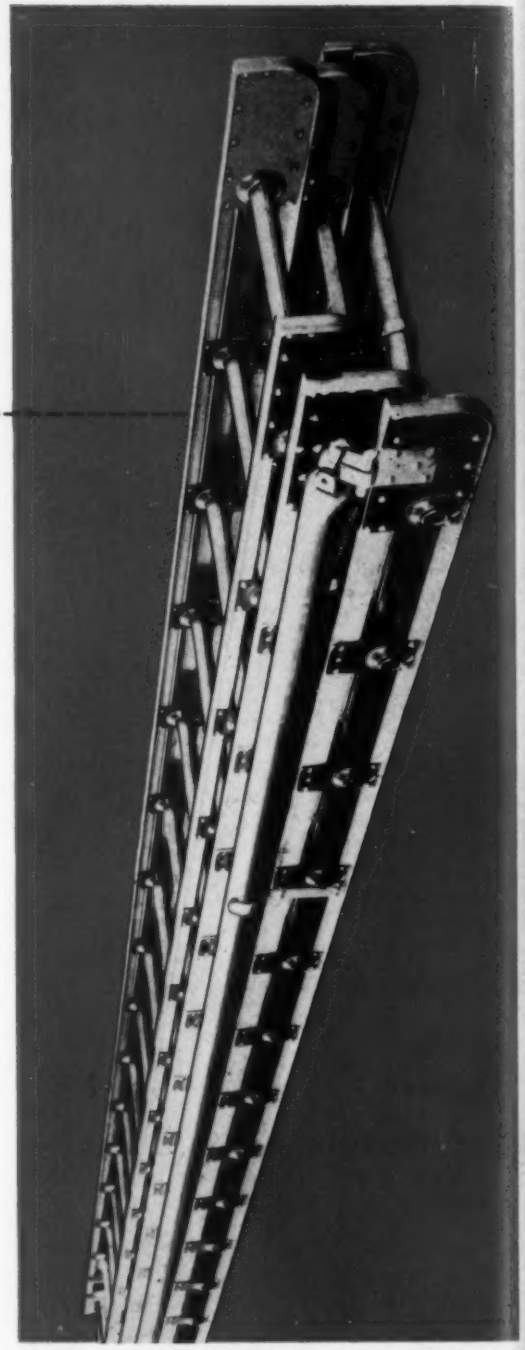
one ladder

that stands up to *every* test



One fire ladder—the *original* aluminum fire ladder—stands out today as the leader in fire-fighting safety and efficiency. The experience, the *test* of 18 years has proved beyond all doubt that *original* aluminum ladders perform better and stand up better than any other type of ladder.

Built of strong, light ST61 aluminum alloy these ladders are designed for fast, easy placement in confined spaces, using fewer men than cumbersome wooden ladders. Original aluminum ladders are *rugged*—require no care—and are splinter-proof, spark-proof, rust-proof and practically *wear*-proof.

Adding to the endurance and safety inherent in aluminum construction are the dozens of details of engineering and fabrication which distinguish *original* aluminum ladders from any other fire ladder. Stiff extruded T-channel design of long members, permanently anchored corrugated rungs and riveted double-plate bracing are a few of these exclusive test-proved features.

For *tested* safety, *tested* efficiency, *tested* durability, specify original aluminum ladders as original or replacement equipment.

ORIGINAL MANUFACTURERS OF ALUMINUM FIRE LADDERS

ALCO-LITE ALUMINUM LADDERS

ALUMINUM LADDER COMPANY

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IN CANADA: C. E. HICKEY & SONS, LTD.,
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SINGLE WALL LADDERS • LIGHT-DUTY EXTENSION LADDERS • HEAVY-DUTY 2, 3 AND 4-SECTION EXTENSION LADDERS • ROOF LADDERS • FOLDING LADDERS • PIKE POLES

CATALOG ON REQUEST

B.F.Goodrich end protection adds 100% more strength in coupling area

Protects tube from damage when hose is being coiled

END protection is to fire hose, what extra cord plies are to a tire. It stops tube cracks, blowouts, adds years of service life. Because of end protection *not one single length* of B. F. Goodrich fire hose has ever failed in the coupling area. Here's one reason why, length for length, B. F. Goodrich fire hose outlasts any ordinary fire hose on the market.

Tube armored with end protection — End protection is an added ply of hard woven cotton cords that extends back for 12" at each end of B. F. Goodrich fire hose. This extra cushion of protective cords protects the tube from damage when the coupling ring is expanded, when the hose is being connected to a water gate, or coiled up.

Jacket strength uniform—B.F. Goodrich fire hose jackets are woven of more (but finer) cords, that make the jackets stronger yet no more bulky than ordinary jackets. The cords are prestretched and woven under uniform tension, so that each cord will bear an equal share of the pressure load. Treated by the Hydroseal process, it resists freezing, waterlogging, mildew and rotting. Flat cure, developed by B.F. Goodrich, reduces hose tension, makes racking and coiling easier.

Couples better — Available with all standard couplings, end protection adds an extra thickness of ply material for the coupling to grip. Therefore all couplings make a tighter seal with B. F. Goodrich hose. Special threads to match those in service furnished at no extra cost.

For the most fire hose for the money, insist on B. F. Goodrich end-protected hose. No other hose can match the service life it delivers. See it at your local distributor. *The B. F. Goodrich Company, Industrial and General Products Division, Akron, Ohio.*

Fire Hose
BY
B.F.Goodrich

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for Men of Action!

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Every Midwestern product combines the thoughts and suggestions of practical Fire Chiefs and firemen from every section of the country . . . and every purchaser profits from years of Midwestern research and experience. That is why the famous Mackinaw Coat and other Midwestern clothing have embodied in their design every feature necessary for the protection and comfort of firemen.

In our vast selection of crude rubber materials you will find a type of fabric suitable for your climate and needs. The softness and flexibility in the high-grade materials used are your assurance of long time service and comfort. Many Fire Chiefs are now including Midwestern clothing in their regular yearly budget and, by placing your order early, you can be assured of this adequate protection when needed.

For complete information, have your Midwestern dealer show you our new garments now manufactured from crude rubber compounds. A letter to the factory will also bring you material samples for your inspection.

We now have available: White, Ivory and Brown crude rubber coats for Chiefs, Assistants and other officers; also all sizes short and ¾ length felt lined Firemen's boots for immediate shipment.

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MACK PUMPER*-TANKERS

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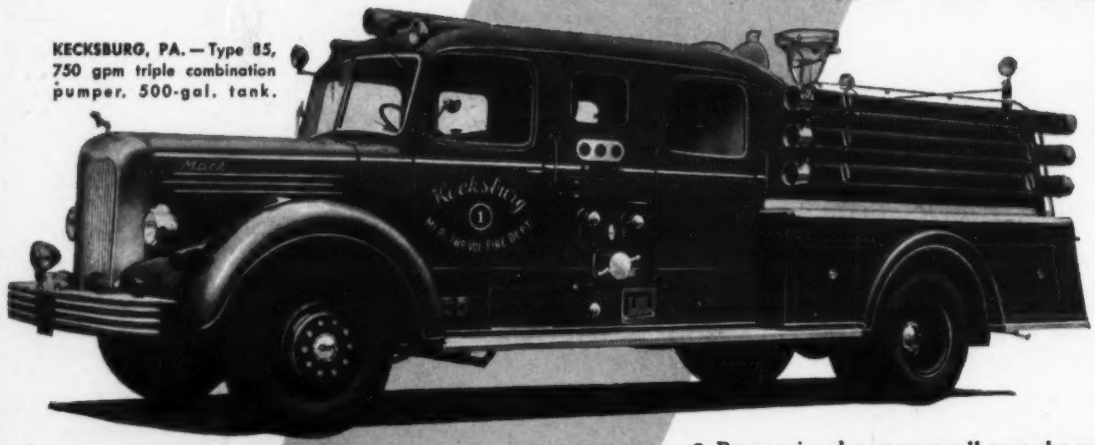
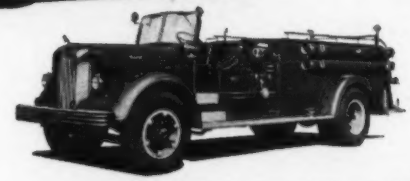


KECKSBURG, PA. — Type 85, 750 gpm triple combination pumper. 500-gal. tank.

NORTH GREECE, N. Y. —Type 95, 1,000 gpm triple combination pumper. 1,000-gal. tank.



MEXICO CITY—Type 21, 1,250 gpm triple combination/high-pressure pumper. 800-gal. tank.

BERRYVILLE, VA. — Type 505, 500 gpm triple combination/high-pressure pumper 600-gal. tank.

ALEDO, ILLINOIS—Type 45, 500 gpm triple combination/high-pressure pumper. 500-gal. tank.

• Progressive departments all over the country — in both rural and urban communities — are strengthening their fire-fighting facilities with the latest development in modern apparatus—fully equipped pumper-tankers . . . especially valuable in these days of widespread water shortages. Here as in other types of equipment, Mack leadership is reflected in the widespread volume of orders for this Mack-pioneered development.

As built by Mack, pumper-tankers are invaluable for quickly getting water to—and on—the fire for fast "stops". In addition to supplying water-carrying capacities up to 1,000 gallons, these Macks also serve as a complete fire-fighting unit with major pumps, hose bodies, ladders, lights and all other essential equipment. Moreover, they are ideally suited for added specialized operations, such as low or high pressure fog, foam, or wet-water applications.

The well-rounded versatility of Mack pumper-tankers recommends them to forward-looking municipal fire officials, as well as to country districts where their value has been well demonstrated. And firemen know, too, that only Macks possess the extra stamina, ruggedness and power demanded by this type of service. If you are investigating pumper-tankers, make sure to make use of Mack's long, broad experience.

modernize with

Mack fire apparatus out-performs them all

MACK MANUFACTURING CORPORATION

FIRE APPARATUS DIVISION

Long Island City 1, N. Y.

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7936

TRIPLE COMBINATION PUMPERS—500 to 2000 GPM . . . SQUAD AND HOSE CARS . . . AERIAL, CITY SERVICE AND QUADRUPLE COMBINATION LADDER TRUCKS

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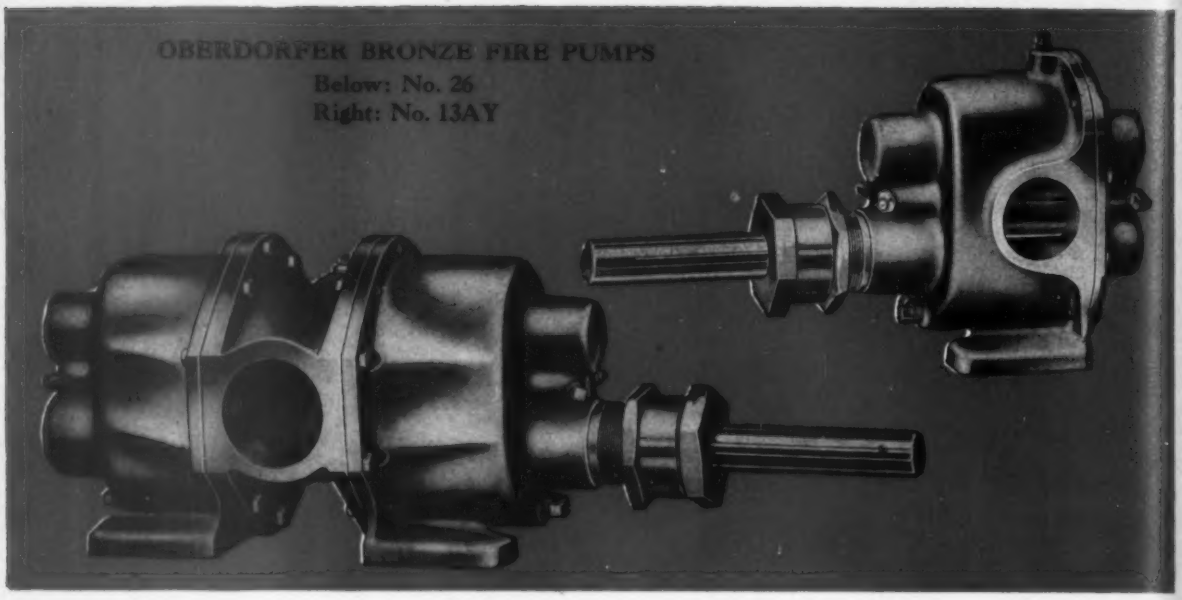


An Oberdorfer Bronze Booster Pump + a wetting agent in your booster tank = modern fire fighting equipment at its best

Whether your community is under 100 population, or over 1,000,000, you cannot afford to be without this combination.

Pump No.	Pump Shaft RPM	Pounds Pressure	Hose Length and Size	Dry Suction Lift in Feet	Volume in Gal. per Minute
13	1600	120	500′-1½″	15′	75
13	2000	100	500′-1½″	15′	100
26	1600	120	500′-1½″	15′	150

The #13 Oberdorfer Pump lists at $69.00; the #26 at $172.50. Both are corrosion-resistant all bronze construction with stainless steel shaft, assuring longer useful life than iron pumps costing far more.

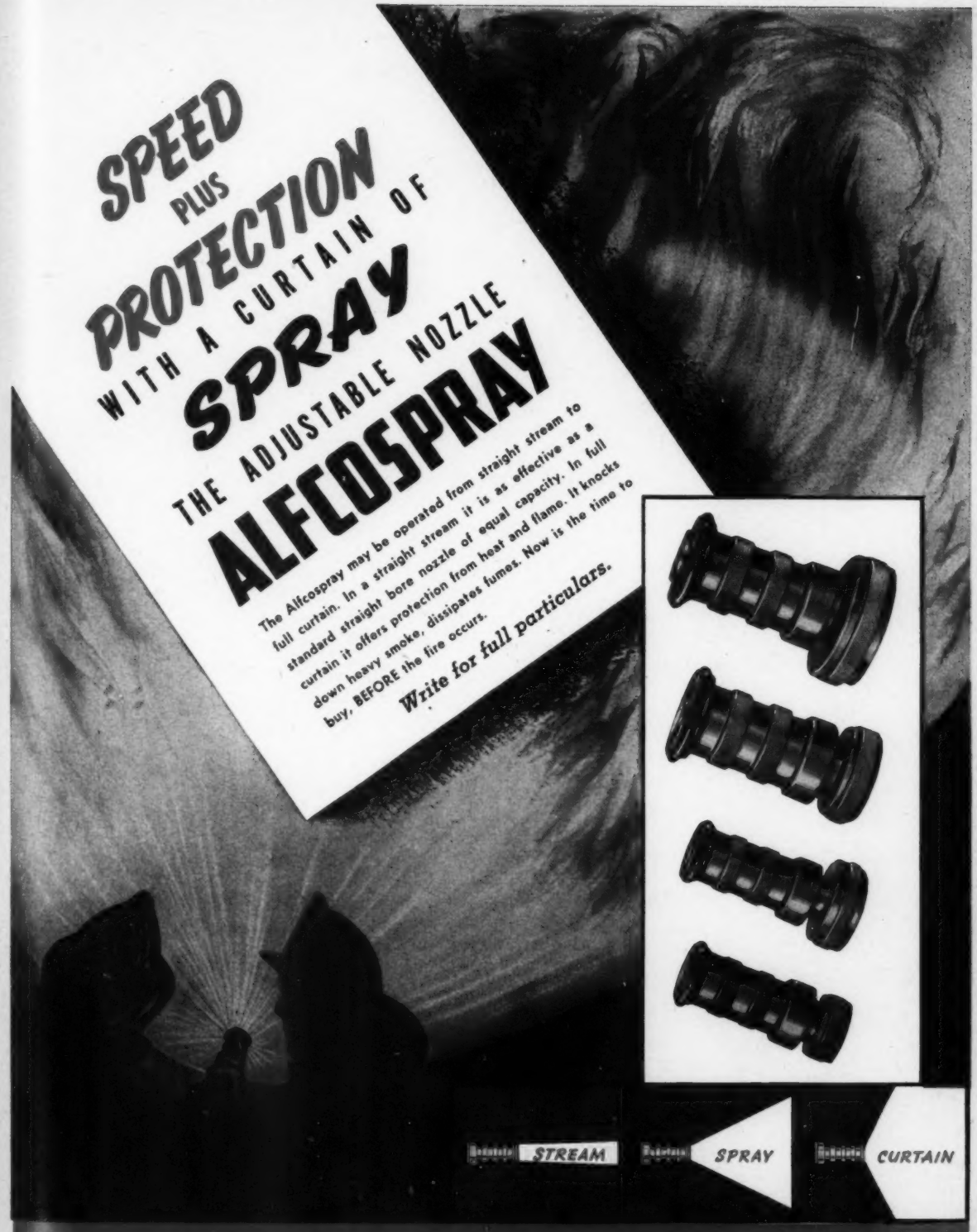
These pumps are available to every reputable fire apparatus builder in the U. S. and Canada and through our agents everywhere.

OBERDORFER FOUNDRIES, INC., SYRACUSE, NEW YORK

EST. 1876

OBERDORFER

Booster Pumps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THE ADJUSTABLE NOZZLE
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The Alfcospray may be operated from straight stream to full curtain. In a straight stream it is as effective as a standard straight bore nozzle of equal capacity. In full curtain it offers protection from heat and flame. It knocks down heavy smoke, dissipates fumes. Now is the time to buy, BEFORE the fire occurs.
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There is an Alfcospray Model E Nozzle available for all sizes of hose from ¾" to 2½", to suit your requirements.

ONLY *Smithco*

gives you a 2000 GALLON FIREFIGHTER

the NEW *Smithco* FIREFIGHTER

. . . designed especially for suburban and rural communities with limited water supply

The new Smithco Firefighter delivers the goods. No rural or suburban community can afford to be without it. Only Smithco gives you a 2000 gallon carrier plus all these extra features.

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2. 1500 Watt 110 Volt A. C. Light Plant
3. Three 250 Watt Floodlights, Cable, Adapters, etc.
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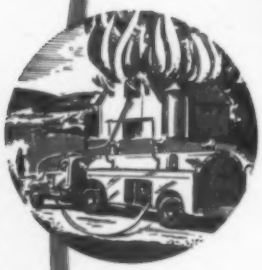
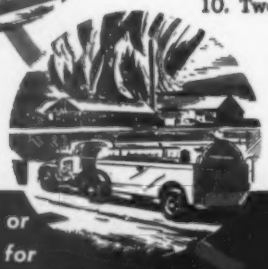
5. One 10' Aluminum Folding Ladder
6. Two 10' Sections of 2" Suction Hose with Quick Detachable Couplings
7. Three hundred feet of 1½" Underwriters "DJ" Hose
8. Two hundred and fifty feet of ¾" Booster Hose
9. One ¾" Mystery Fog Nozzle
10. Two 1½" Mystery Fog Nozzles
11. One 1½" Siamese Connection
12. One 24' Aluminum Extension Ladder
13. Four Rubber Rainsuits and Hats
14. Two 15-pound CO_2 Extinguishers
15. One Pioneer Rack with Axe, Pick and Shovel
16. Two 5-Gallon Fuel Cans

RECOMMENDED TRACTOR—F7 or F8 Ford, WC-20T White or Equal



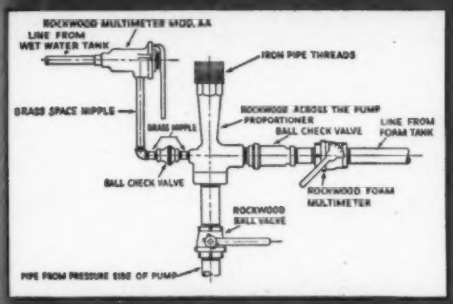


Phone, wire or write today for further information!

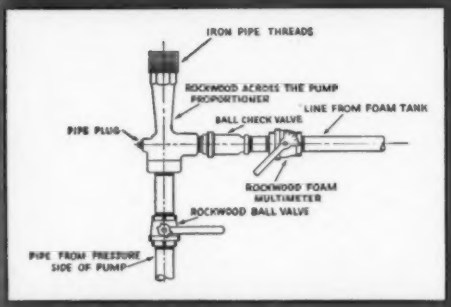
L. B. SMITH, Inc.

CAMP HILL, PA., SYRACUSE, N. Y., PHILADELPHIA, PA.

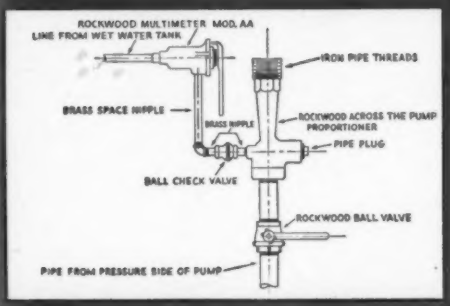
HOW TO AUTOMATICALLY FEED FOAM LIQUID OR WETTING AGENTS INTO YOUR FIRE HOSE LINES



1. Rockwood Across Pump Proportioner Model Dual B for FOAM and WET



2. Rockwood Across Pump Proportioner Model Dual B for FOAM ONLY



3. Rockwood Across Pump Proportioner Model Dual B for WET ONLY

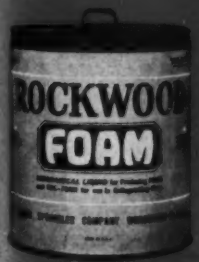
3 NEW ROCKWOOD AUTOMATIC PROPORTIONING UNITS THAT WILL PAY FOR THEMSELVES

This simple and most accurate way to feed FOAM liquid or Wetting agent into your fire hose lines is also the *least expensive* — and it is entirely *automatic.*

No longer is it necessary to pour these liquids into a booster tank in a hit or miss fashion. You can now use these only when you need them. A simple turn of a metering valve automatically mixes the right amount of Wetting agent or FOAM liquid with water — without guesswork.

Here are three new Rockwood Automatic Proportioning units. One provides automatic proportioning for both FOAM liquid and Wetting agent, another is for FOAM liquid only and the third kit automatically proportions wetting agent only. All three kits are shown at left. They are known as the new type B Rockwood Across-the-Pump Proportioners.

If you are planning to buy a new fire truck, be sure to specify one of these new Rockwood proportioners. They can also be added to the fire trucks you now have in service. Write for complete operating and installation data and prices.



To put out fires faster and more economically use Rockwood Foam Liquid with the new Type FFF Rockwood Fog-FOAM Nozzle.

The most efficient way to apply a *wetting agent* to most fires is thru a type SG-48 Rockwood Triple-action WaterFOG Nozzle.

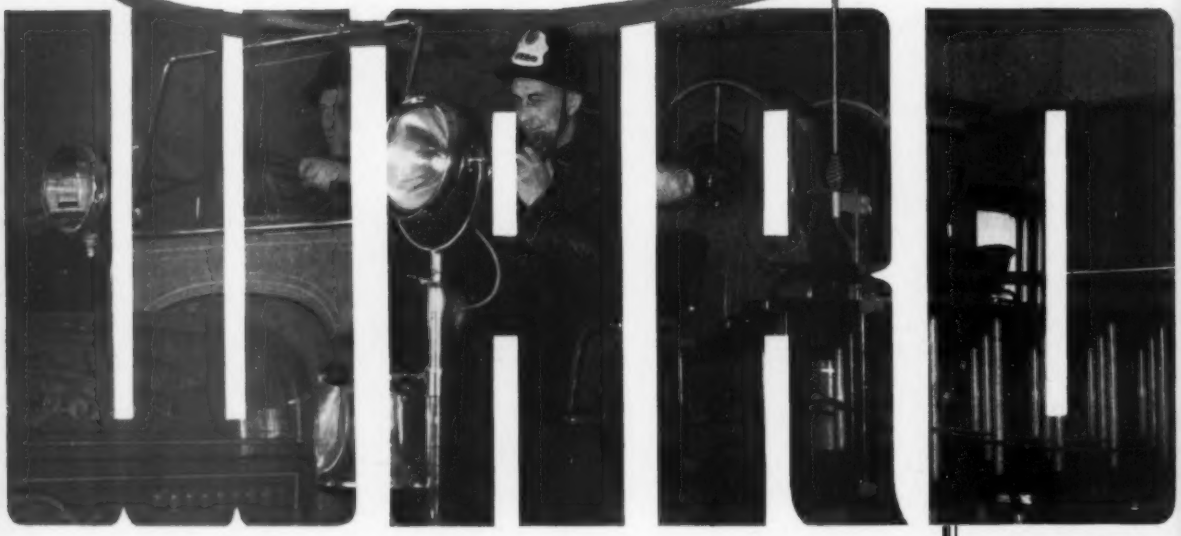
ROCKWOOD

ROCKWOOD SPRINKLER COMPANY

54 HARLOW STREET WORCESTER 5, MASSACHUSETTS

Specialists in Fire Protection Engineering, Equipment and Installation since 1907

When seconds mean lives and dollars - you can depend on Ward Aerials ---

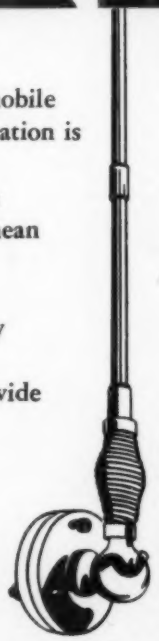


Fire fighting efficiency has been increased by the use of mobile 2-way radio in dispatching equipment. Ward Products Corporation is proud of America's heroic fire fighters.

And we are proud of the part Ward antennae play in the transmission and reception of messages when seconds saved mean lives and dollars.

Most fire companies rely on Ward aerials because they are ruggedly constructed to withstand the abuse to which they are subjected.

Ward whip rod aerials are made of a special alloy to provide the greatest possible durability and resilience.



Model SPP-3 is a non-rusting alloy swivel base for mounting at any point desired.

Model SPP-3A is a shock mounting spring for fullest protection against impact damage.

Model SPP-3B is an 84½" stainless steel whip rod, shown here attached to Model SPP-3 swivel base and Model SPP-3A shock mounting spring.

WARD
World's Finest
Aerials

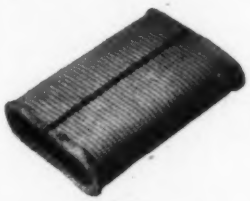
Ward is the largest and oldest exclusive maker of auto radio and television aerials.

WARD PRODUCTS CORPORATION
1523 E. 45th STREET • CLEVELAND, OHIO
Division of the Gabriel Company

Your community never had a bad fire? The old fire hose will do another year? Maybe so. But don't push your luck too far. One rip-roaring blaze would cost plenty more than the saving you make by pinching on fire equipment.

With BWH Fire Hose, no time is lost in getting water on a fire. It's lightweight, handles easily on the ground or on ladders. Flat cured to fold quickly and compactly in the truck bed. And when it comes to toughness, you can't beat BWH Hose for pressure resistance, year in, year out, hard service and ability to take punishment

Look for the "General" trademark in the classified section of your phone book. Let this organization of Fire Equipment experts tell you more about the BWH 72-year leadership in the fire hose field.



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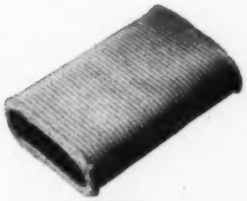
"BOSTON FIRE JACKET" HOSE
Double Jacket
Heavier, stronger fibers, perfect adhesion, smooth, friction-resistant waterway. Rates tops in every test!



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Designed for easy handling and long service on tough jobs. Ages well, withstands high pressures.

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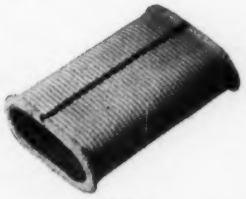
For long, trouble-free performance in communities where a light service hose is adequate.



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Single or Double Jacket
Made in strict accordance with the National Board of Fire Underwriters' specifications. Labeled or unlabeled.

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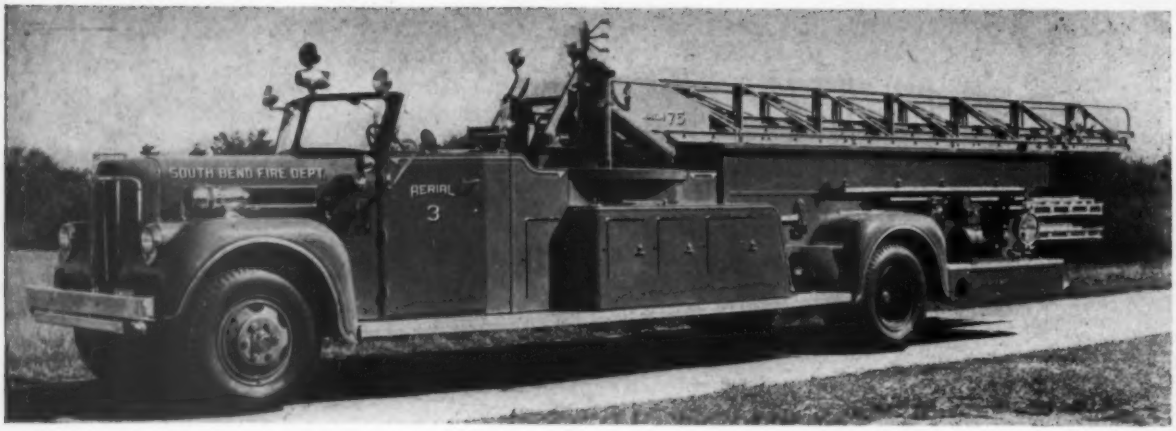

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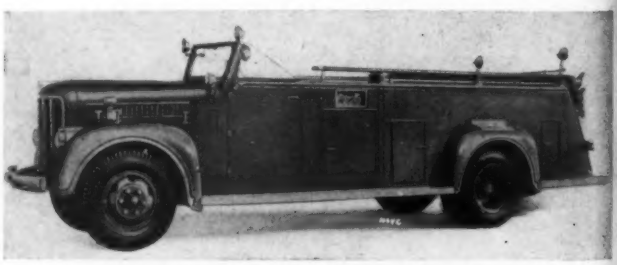
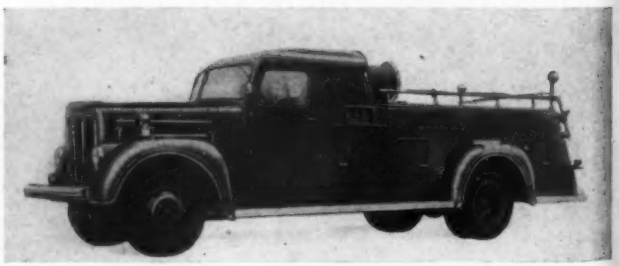
Standard of Comparison

WHEN you select fire apparatus compare what you select with what Maxim Buyers are getting.

Be certain that the apparatus you select reflects the years of experience and the "know-how" that you can get in Maxim apparatus.

You can safely use Maxim as the "Standard of Comparison." We invite you to try a Maxim.





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Read What Users Say About
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ACTUAL UNSOLICITED TESTIMONIALS TAKEN DIRECTLY FROM OUR FILES

"Never Saw So Much Fire Extinguished with So Little Water!"

A rancher phoned for help to fight a prairie fire. The Fire Chief and I took 2 ***INDIAN FIRE PUMPS*** *and were able to extinguish the fire as fast as we could walk. Flames were from two to four feet high driven by a strong wind.*

Best of all we still had water left in both five gal. tanks. ***INDIANS*** *sure do a great job.*

W. H. Burden, Councilman

"Saved the House with INDIAN FIRE PUMPS!"

Two of your ***INDIAN FIRE PUMPS*** *held a fire in my home in check until the fire truck from Augusta made the run out into the country 7-1/2 miles and saved the house.*

The ***INDIAN*** *did great work holding the fire in check and is a wonderful fire fighter.*

Mrs. Jennie J. Brackett

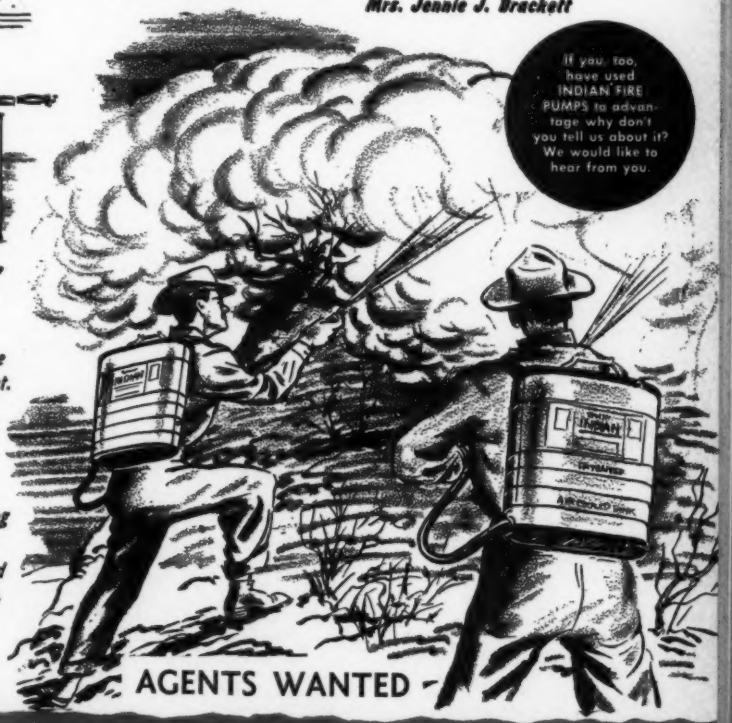
If you, too, have used INDIAN FIRE PUMPS to advantage why don't you tell us about it? We would like to hear from you.

"Uses INDIANS More Than Any Other Equipment!"

Rush four No. 90B solid brass ***INDIAN FIRE PUMPS*** *and four carrying racks for mounting.*

We have several of these pumps now and are adding more because we use ***INDIANS*** *more than any other equipment in our department.*

J. S. Allensworth *Fire Chief*



"INDIAN FIRE PUMPS Very Successful!"

Your ***INDIAN FIRE PUMP*** *has been very successful in extinguishing fires beyond the reach of the booster line of our fire patrol jeep.*

On one occasion the fire had dropped over the edge of a cliff and it was necessary to climb the face of the cliff to put out the fire. As the ***INDIAN*** *could be back packed there was no difficulty in climbing to the spot fires and extinguishing them.*

Timothy G. Stillman
Fire Protection Laboratory

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. . . IT PAYS 2 WAYS TO SAFEGUARD YOUR PROPERTY

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Many Businessmen Are Saving Money by Adopting ADT Central Station Automatic Protection Services

The high degree of security against fire, burglary and other hazards provided by ADT Automatic Protection Services in most cases makes it possible to effect substantial economies through modification of other more costly but less effective protective measures.

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AUTOMATIC HEATING SYSTEM SUPERVISORY SERVICE
AUTOMATIC INDUSTRIAL PROCESS SUPERVISORY SERVICE

We shall be glad to explain how these services may be applied to solve your particular protection problem.

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AMERICAN DISTRICT TELEGRAPH CO.
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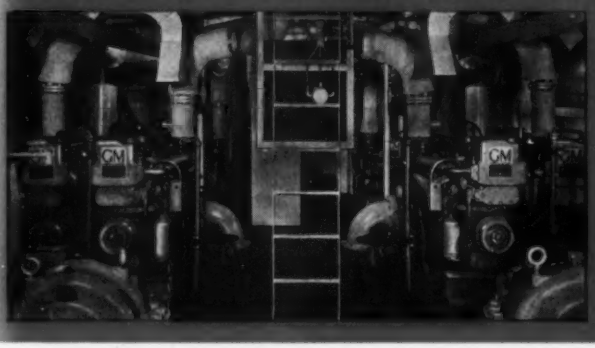
Central Stations in All Principal Cities

There's a new Trend in Fireboats



All over the country, the trend is to smaller, more flexible fireboats of greater pumping capacity—and General Motors Diesel power

BOSTON last Spring converted two 97-ft. boats into 7000 g. p. m. pumpers with GM Diesel engines for pumping power. These two boats save $100 a day in fuel over the old steam pumpers.

SEATTLE modernized two larger fireboats, one gasoline powered and one steam, by installing 6 "Twin 6" Diesels built by General Motors in each boat for pumping.

PHILADELPHIA bought a new 75-ft. 6000 g. p. m. fireboat built around a GM Diesel "Quad 6" engine. And almost immediately ordered two more like it.

HOUSTON Fire Department officials studied Philadelphia's new boats and had the R.T.C. Shipbuilding Company turn out one for them. Same plans, same power—the GM Diesel 800 H.P. "Quad 6".

CHICAGO recently accepted two new 93-ft. 12,000 g. p. m. GM Diesel-powered fireboats after grueling 8-hour continuous pumping tests. Built at Sturgeon Bay by Christy Corporation, each boat is equipped with four 400 H.P. General Motors "Twin 6" engines and two 30 kw GM Diesel generator sets.

Smaller boats, with modern mass-production power units, obviously cost less. Rugged, all-steel 6000 to 12,000 gallons-per-minute units are being built today for *half* what cities expected to pay for a fireboat a few years ago. Available at a minute's notice without warm-up or "round-the-clock" firing of steam boilers, these boats save thousands of dollars in fuel costs alone—money that can be spent more effectively for additional fire equipment and man power.

Compact, high-speed, 2-cycle GM Diesel engines *direct-connected* to high capacity centrifugal pumps put 800 to 1600 H.P. complete with pumps and piping into a space not much larger than a good size living room.

With front-end power take-offs direct-connected to pumps, the full power of these versatile engines is available for either propulsion or pumping. Multiple-engine arrangement of GM "71" Diesels provides extreme flexibility and reserve capacity. One or more engines can be shut down while the others are operating.

What is *your* city doing about modern water-front fire protection? The boat shown above is fully described in a booklet, "Chicago's New Fireboats". It's yours for the asking.

DETROIT DIESEL ENGINE DIVISION

SINGLE ENGINES . . . Up to 200 H. P. **DETROIT 28, MICHIGAN** MULTIPLE UNITS . . . Up to 800 H. P.

GENERAL MOTORS

GM GENERAL MOTORS DIESEL POWER

DIESEL BRAWN WITHOUT THE BULK

Equip now for all-around protection with John BEAN Airport Special

ONE OF the hundreds of versatile John Bean Airport Specials in use all over the country. 435-gal. tank—60 G.P.M. Pump at 850 lbs. pump pressure—2 hose lines. Can be mounted on any style or size chassis.

FIRE-FIGHTING equipment for airports has a two-way job to perform—to combat crash fires *plus* non-crash fires in hangars, buildings, and gasoline trucks.

That's a tall order but one that the John Bean Airport Special is easily capable of filling. This reliable unit has proved itself in actual use time after time.

Bean Airport Specials include the famous Bean high-pressure fog—fog foam, plus a regular foam system. These fire fighters can be mounted on any style or size chassis and accessories added to meet your specifications.

Carrying its own water supply, the Bean unit goes into action the instant it arrives at a blaze. It can be manned without a special crew, by your regular field personnel after our training.

Bean Airport Specials are reasonably priced and offer maximum protection for airports. Write today for additional details.

BEAN Original HIGH-PRESSURE FOG FIRE FIGHTER

CAN BE MOUNTED ON MOST STANDARD TRUCK CHASSIS

FOOD MACHINERY AND CHEMICAL CORPORATION

JOHN BEAN DIVISION, DEPT.126, LANSING 4, MICH. • JOHN BEAN DIVISION (WESTERN), 409 JULIAN ST., SAN JOSE, CALIF.

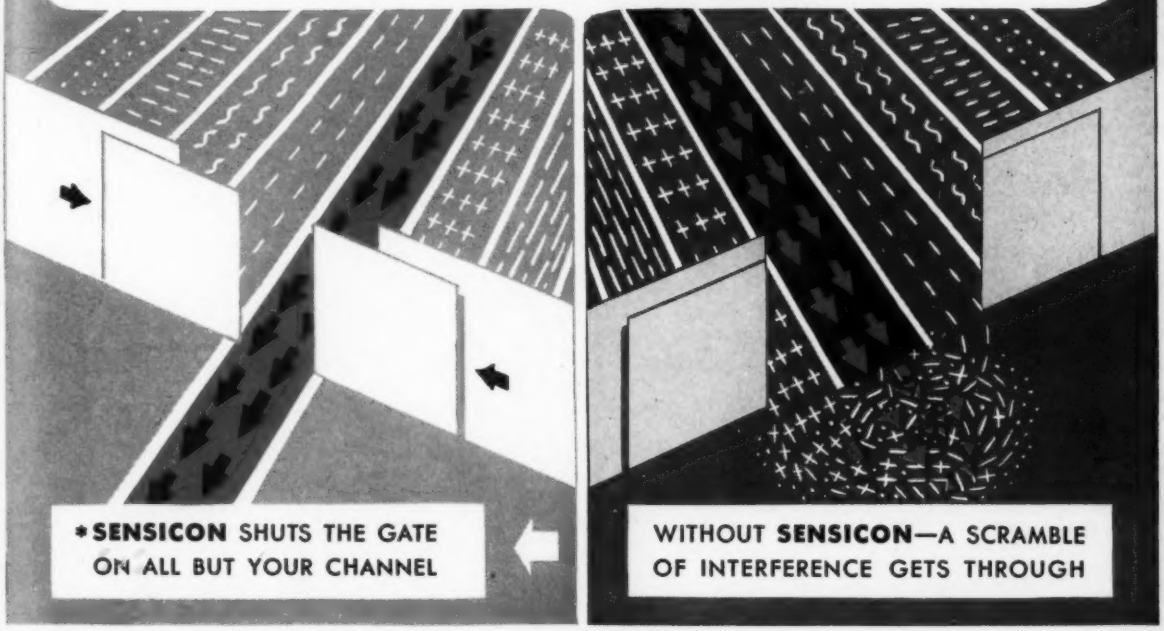
BUILDERS OF BEAN HIGH-PRESSURE PUMPS FOR OVER 60 YEARS

We shall appreciate your mentioning FIRE ENGINEERING *when writing advertisers*

MOTOROLA "RESEARCH" LINE OF F.M. 2-WAY RADIO

Proof of Adjacent Channel Operation...

Customers say: It Works!



Read this Enthusiastic Report!

"Our Sensicon receivers are giving us peak performance even when operating close to adjacent channel stations. Reception is interference-free although the adjacent channel traffic is heavy. With our adjacent channel neighbors using other types of equipment, it's a different story—interference and even capture of their receivers in spite of absolute modulation control on all transmitters in the area."

This report is typical of those received daily pointing out that Sensicon is the answer to the adjacent channel problem. It is the equipment for your system—to assure you maximum protection of your long-term investment.

Compare feature for feature with any other equipment on the market. Get the complete story. Write today.

CURRENT ON DELIVERIES

* RESEARCH LINE **Motorola** F.M. 2-WAY RADIO

Communications & Electronics Division • 4545 W. AUGUSTA BLVD. • CHICAGO 51, ILLINOIS

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AVOID COLLISIONS!

PROTECT THE LIVES OF YOUR MEN AND YOUR
VALUABLE APPARATUS WITH THE ONE SIGNAL LIGHT
THAT HAS STOOD THE TEST OF MORE THAN SIXTEEN YEARS OF SERVICE

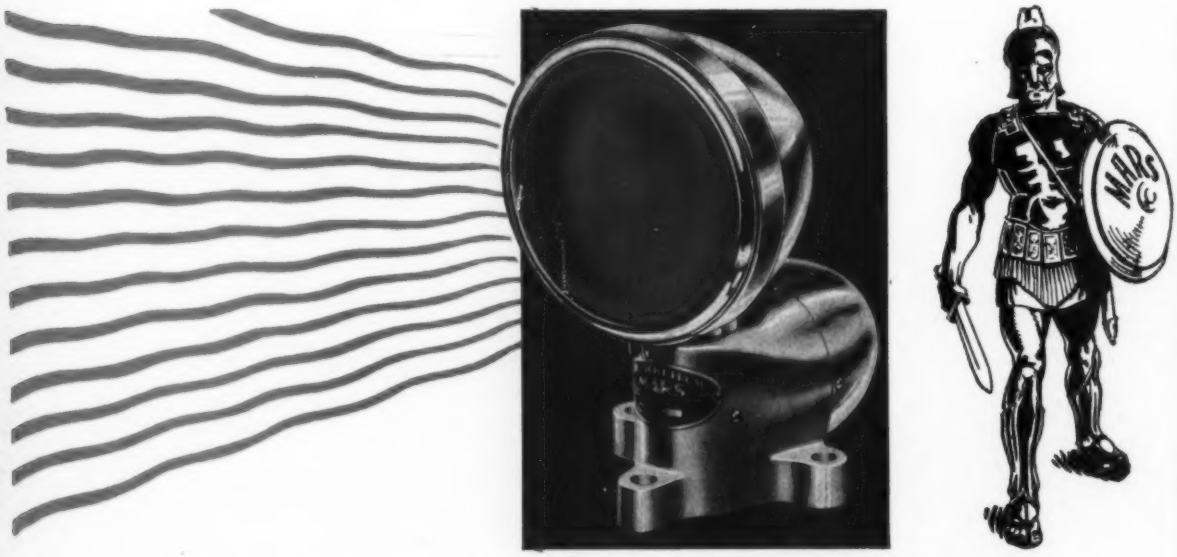
THE MARS SIGNAL LIGHT

is the only OSCILLATING warning signal light that FLASHES a POWERFUL FIGURE 8 beam of red light—a mile ahead of your apparatus—from building line to building line—and hundreds of feet into the air. This POWERFUL FIGURE 8 BEAM of red light can be plainly seen by traffic APPROACHING intersections ahead of you LONG BEFORE you reach the crossing. Motorists everywhere recognize THIS light.

THERE ISN'T ANOTHER LIGHT LIKE IT

IN USE ON THOUSANDS OF FIRE APPARATUS AND OFFICERS' CARS
FROM COAST TO COAST

It Is Fully Guaranteed for Five Years
Mars Has Never Failed to Back Up This Guarantee and Never Will



START 1950 RIGHT WITH A MARS SIGNAL LIGHT

IMMEDIATE DELIVERY

MARS SIGNAL LIGHT CO.

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Insist on MARS when you order New Equipment — Install it on Present Equipment

IT WILL LAST AS LONG AS YOUR APPARATUS

ALSO USED BY MANY OF AMERICA'S LEADING RAILROADS

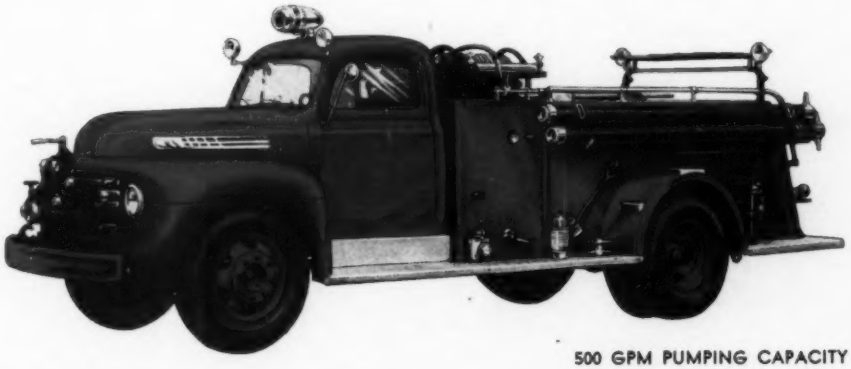
It will help if you mention FIRE ENGINEERING *when writing advertisers*

American FIRE APPARATUS ON THE MOVE!

THE American Fire Apparatus "Tanker" truck really goes to the fire. Equipped with the new *frost proof* Barton-American UA-50 front mounted fire pump producing effective fog streams while the truck is in motion. A feature not possible with other type pumps.

The "Tanker" can be built on any commercial chassis and is advance engineered for performance durability, service and maneuverability. Designed for maximum water carrying capacity, and meets all Underwriters' requirements. Makes an effective metropolitan unit as well as being ideal for rural protection.

The "Tanker," like our "Pumper" (with the BARTON-AMERICAN DUPLEX-MULTISTAGE midship fire pump), is equipped with two Barton Super-fog guns. (See box below.)



500 GPM PUMPING CAPACITY

Barton Super-fog is the result of several years of research. It is a highly developed fog system producing long and short range fog streams and powerful straight streams at safe high pressures. Built around both the Barton-American front and midship fire pumps.

"Super-fog" is the most effective fire fighting stream yet produced.

American FIRE APPARATUS

We invite your inquiry.
Descriptive literature available.

DIV. AMERICAN-MARSH PUMPS, INC.
BATTLE CREEK, MICHIGAN

Accessibility of PUBLIC FIRE ALARM BOXES Essential to Public Safety

These Newspaper Items Tell Why

THREE LIVES LOST

Aroused by Smoke, Neighbor Routs Residents from North High St. Apartment

Dialed Wrong Number

A man and two small children suffocated in a blaze which swept an apartment over the Dutch Cafe at 980½ N. High-st shortly after midnight.

It was discovered by Mr. and Mrs. George T. Collins, who lived across the hall.

Mr. Collins said he ran up and down the hallways of the second and third floors, routing 25 other residents. The burned apartment was on the third floor.

"I ran to a phone and tried to call the fire department," Mr. Collins told reporters. "But I was excited and apparently dialed the wrong number."

GAMEWELL
FIRE ALARM BOX

A fire tragedy averted

A woman set fire to the drapes in an eighth-floor room of the Ansley hotel Tuesday night, causing 14 pieces of fire-fighting apparatus to be rushed to the building, Radio Patrolmen R. E. Nickerson and Roy Fleming said Wednesday. Police charged her with being demented.

Considerable damage was done to the walls of the room, the officers said.

The officers praised the fire department for its quick response to the alarm. Three aerial ladders, six pump trucks, one light truck, a rescue squad, and three fire department superior officers answered the call.

The alarm was turned in by an unknown passer-by, who saw flames in the hotel room on the eighth floor and pulled a fire alarm box at the corner of Forsyth and Luckie sts.

—*From Atlanta Journal*

Time — the Vital Element

Time lost in sending alarms may result in loss of human life and great property values. The above extract from the Columbus, Ohio Citizen account of a fire in which 3 persons lost their lives is a striking instance.

Many similar instances of fires checked in their incipiency and serious losses averted by the prompt use of public fire alarm boxes occur daily but, the actual losses being trivial, such cases rarely receive publicity.

THE PUBLIC FIRE ALARM BOX —

REMAINS THE FIRST LINE OF

DEFENSE AGAINST FIRE

Statistics show that few, if any, cities have enough of them. We invite your inquiry.

THE GAMEWELL COMPANY

NEWTON UPPER FALLS 64, MASSACHUSETTS

IN CANADA: NORTHERN ELECTRIC COMPANY, LTD., MONTREAL

JANUARY, 1950

FIRE ENGINEERING

VOL. 103, NO. 1

With the Editor

No Checking of Progress

It is today generally admitted that the business of fire protection is more than the hit-or-miss, rule-o'-thumb proposition that it was not so many years ago. One does not have to agree with the claims that today's firefighter must be at least something of the chemist, the builder, the hydraulic and electrical engineer in order to accept that contention, although there is plenty of evidence to warrant the assertion, but one does have to admit that many of the concepts and methods of yesteryear won't do at all when it comes to coping with today's highly specialized problems of fire control and extinguishment.

Perhaps in no single phase of the vast business of fire control is this difference between the ideas and techniques of yesteryears and of today so noticeable as in the factor of fire attack.

The rough-and-ready fire fighter of those days relied on brawn and plenty of water. If he couldn't "make" the fire floor because smoke was too thick, that was all right. He was content to throw volumes of water into the smoky interior from outside. In fact, to many blueshirts of those days, the final measure or good fire operations was the amount of water that could be brought to bear on the fire. Water damage was of little or no concern to him. The business of drowning out the fire was more important in his eyes than the minor detail of conserving water to save property.

In those good old days it was more a question of how much water you could get on the fire. Today that has been revised to: how much fire can you extinguish with how little water, or other extinguishing agent.

Then it was: how much smoke, fumes and gases can a fireman take, and stay on his feet? Today, it is: how much fighting can he do with the least physical effort and punishment?

Then, it was 2½-inch hose for everything: large tips, or open playpipes, six men to a line and "give her the throttle."

Today, it is the lighter, more maneuverable hose for most initial fire attacks, with fog nozzles, fog-foam and wet water (and seldom more than two men on the line).

Then, it was: if you can't get in to the heart of the fire because of smoke or gases, don't worry—stay outside and peg away at it with everything you've got; wet down the landscape; set up a strong defense and hold it.

Today, there is no belittling strong defense, but the emphasis is on fast, strong attack, getting in quickly; locating the seat of the fire, and killing it before it can spread. And in order to get in with least punishment to personnel, today's firefighter is not ashamed to wear masks and breathing equipment, and to use all the extinguishing tools that modern science has brought him. In today's professional fire fighting, the emphasis is on attack; taking the fight to the fire.

There will always be those who accentuate the negative; who scoff at anything new and different. Meanwhile the world, and the fire service, goes ahead despite them. Their suspicion, skepticism are forgotten as these improvements are remembered, and used. You can no more return to the "good old days" with their punishment of personnel, wastage of water, and property, than you can discard water fog, foam and respiratory protective equipment and the host of other advancements that go to further modern fire attack.

Fred Shepperd

Photo by Yeoman & Co.

Lumber Piles Burning on a Thousand-Foot Front

This aerial photograph of the West Hartlepool lumber fire shows the blaze being confined to the area in the immediate foreground. Area burned over is the triangular space to the rear of the fire. Lumber piles in the background and to the right were saved by valiant work of the fire fighters.

Huge Lumber Yard Fire Burns for 30 Hours

Twenty-Five Acres of Piled Lumber Destroyed; Firemen Overcome Many Handicaps

While there have been large lumber yard fires in this country over the years, probably none ever reached the size of that which the West Hartlepool, England, Fire Department had to fight early this year. This yard consisted of sixty-five acres of closely piled stocks of lumber, or equivalent to an area 1700 by 1700 feet.

The fire burned over an area of twenty-five acres, or the equivalent of a square 1040 by 1040 feet.

There was considerable delay in transmission of the first alarm, for when the first company arrived a frontage of ten stacks of lumber was involved, and flames were reaching 100 feet skyward. A strong wind was blowing from the west, and embers were being carried a considerable distance.

No hydrant streams were available in the yard area, for the water main system was undergoing repairs. The nearest source of water was a creek, which had to be abandoned by pumpers when it was found that quantities of industrial wastes of a bituminous nature therein were being thrown on the fire, increasing its intensity. The nearest usable hydrants were in the town, necessitating stretches of 2,000 feet and over.

Relay lines were also stretched from the sea, utilizing trailer pumps at the water edge and larger units on the beach.

Fire started about 8:40 on April 27 and was not under control until 3:15 A.M. on April 29, burning about 30 hours.

There were ultimately forty pumpers at work, from West Hartlepool and neighboring communities and, besides the professional fire fighters, there were about 1,000 soldiers on hand, who moved lumber in the path of the fire and aided the firemen.

The following report of the fire was supplied by Chief N. Kettlewell, of the West Hartlepool Fire Department and published in our esteemed contemporary "Fire Protection and Accident Prevention Review," of Bouverie House, 154 Fleet Street, London, England. Through the courtesy of that journal, and its Editor, Mr. G. F. D. Pratt, the article is reproduced herewith.—The Editor.

A CALL of fire was received at 8.37 P.M. on April 27. The predetermined attendance, i.e. major pump and pump escape towing light pump was immediately sent. Chief Fire Officer N. Kettlewell followed on and took charge.

It was found on arrival that an area of timber with a frontage of about ten stacks and extending a considerable distance to the rear was well alight. The flames were about 100 ft. in height above the stacks; flying embers, sparks and radiated heat made approach very hazardous and rapidly increased the fire area. This particular stack yard is of some 65 acres and is situated at the side of a main road. The area alight was in the most inaccessible corner of the yard, and it was necessary to approach by a rough country lane and thence to cross fields to get the major pump and light pump into position at a nearby stream. When these obstacles had been overcome three good jets were quickly got to work on the face of the fire. There was a strong wind blowing from the west and, due to the dry winter and early spring, all timber, sawdust and vegetation was well dried out. The direction of the wind was causing the fire to spread directly into the most thickly stacked area of the yard, and the entire site was menaced by the advancing flames.

Chief Fire Officer Kettlewell ordered in reinforcing pumps from the surrounding Brigades. Efforts were made to work from hydrants on the estate, but, as the mains supplying these hydrants were in the course of repair, the hydrants were ineffective. Extra lines of hose had therefore to be laid from the town's mains on the roadway some 2,000 ft. distant. To lay each of these lines firemen had to climb through narrow timber stacks, over loose props and under railway wagons on 24 sets of sidings. By reason of these difficulties there was an appreciable though unavoidable delay in getting extra water to the fire. The reinforcing pumps were positioned on the roadway and got their lines to work as they arrived. At about 9.15 P.M. there were five good jets on the fire, three from the stream and two from the roadway and it did appear that the fire was being held. About this time the jets from the stream started to crackle badly and there were furious explosions from the point of contact of the jets on the blazing timber. All the firemen within range, including the Chief Officer, were covered with a hot bituminous product and badly burned about the eyes, face and hands. The pumps from the stream had to be shut down, and it was later found that waste products from a nearby factory had contaminated this supply. The loss of these jets at such a vital period of fire-fighting was a severe blow and before other jets could be established from the roadway the fire had spread a further 100 ft. in each direction. At about

2 A.M. on April 28 there were 10 pumps on the fireground. The wind freshened and changed to the south-west, causing the blaze to spread in a westerly direction.

Making Fire Breaks

Police, civilian workers and volunteers were requested to make a break in the props some 150 ft. away from the blaze whilst the Brigade endeavored to reduce the speed of spread by concentrating the maximum number of jets in this area. It was, however, still necessary to retain some jets to the east of the stacks as radiated heat was causing stacks 50 ft. away to burst into flames. At 3.30 A. M. the military were asked to send 70 soldiers to help move the timber and, as the hours wore on, this number was gradually increased until approximately 1,000 were in attendance.

The heat was so intense that 1-in. jets were reduced to steam before they made contact with the burning timber, and it was apparent that the best use of the water was to soak the wood which was in the path of the fire and so reduce the speed of spread. The break in the stacks was completed and covered with strong jets. By very determined efforts the firemen were able to hold this gap for a period of about 15 minutes, when the wind freshened and spread the flames horizontally across the gap, setting fire to the hose and temporarily trapping the occupants. In spite of all efforts at recovery, this gap was lost and the flames spread on through closely-stacked timber. The wind changed direction again and spread the fire across the remaining gap to the east; all available jets were moved in an endeavour to hold this gap as long as possible. Due to the fierceness of the fire and constant wind changes, the firemen were severely punished, many being burned about the face, hands and neck. It is worthy of note that none left the fireground on this score, excepting under orders.

Wagons Moved to Safety

It was apparent that gaps of 50 or 60 ft. could not be held and at about 4.30 A.M. all firemen were withdrawn to the main fire break. Whilst making this withdrawal the hose was removed from over all the railway lines thus allowing the movement to safety of 1,700 wagons. When this operation was completed there were 12 jets playng on the timber at the east side of a 120-ft. fire break. To the north of this break there was a space of about 250 ft., while to the south, the break narrowed to approximately 40 ft., and as the wind was varying from west to south-west it appeared that the fire could be held in its existing position. Although this gap was 120 ft. across and well protected by branches, the radiated heat sorely troubled the branchmen and also caused several small fires on the east side of the break.

It was considered that the north and east side of the break were reasonably safe and, therefore, all available personnel, civilian employees, and military, were moved to the south end to endeavor to widen the gap from 40 ft. to 120 ft. Alternative jets were removed from the main gap and placed to the south to give cover. By now it was nearly 9 o'clock on the morning of April 28, and the past 12 hours' fire-fighting under such terrible conditions was beginning to take toll of both men and machines. The majority of the first crew of West Hartlepool Fire Brigade had to receive medical attention and the first two appliances were out of commission on account of contamination by the bituminous effluent from the stream. At 9.40 A.M. Chief Fire Officer N. Kettlewell was taken to hospital where he collapsed and was detained, and during the next hour every member of the West Hartlepool Brigade was taken to hospital for treatment to eyes and burns received. Prior to leaving the fireground Mr. Kettlewell passed control of the fire to Chief Officer C. V. Hall (Durham Fire Brigade) as, by reason of injuries received and the strenuous nature of the previous 12 hours, all officers of his own Brigade were in an exhausted condition.

The scheme of extending the existing fire break at the south end was continued and efforts made at the same time to provide water from the sea. At 1.13 P.M., the following message was recorded: "Fire still spreading, now

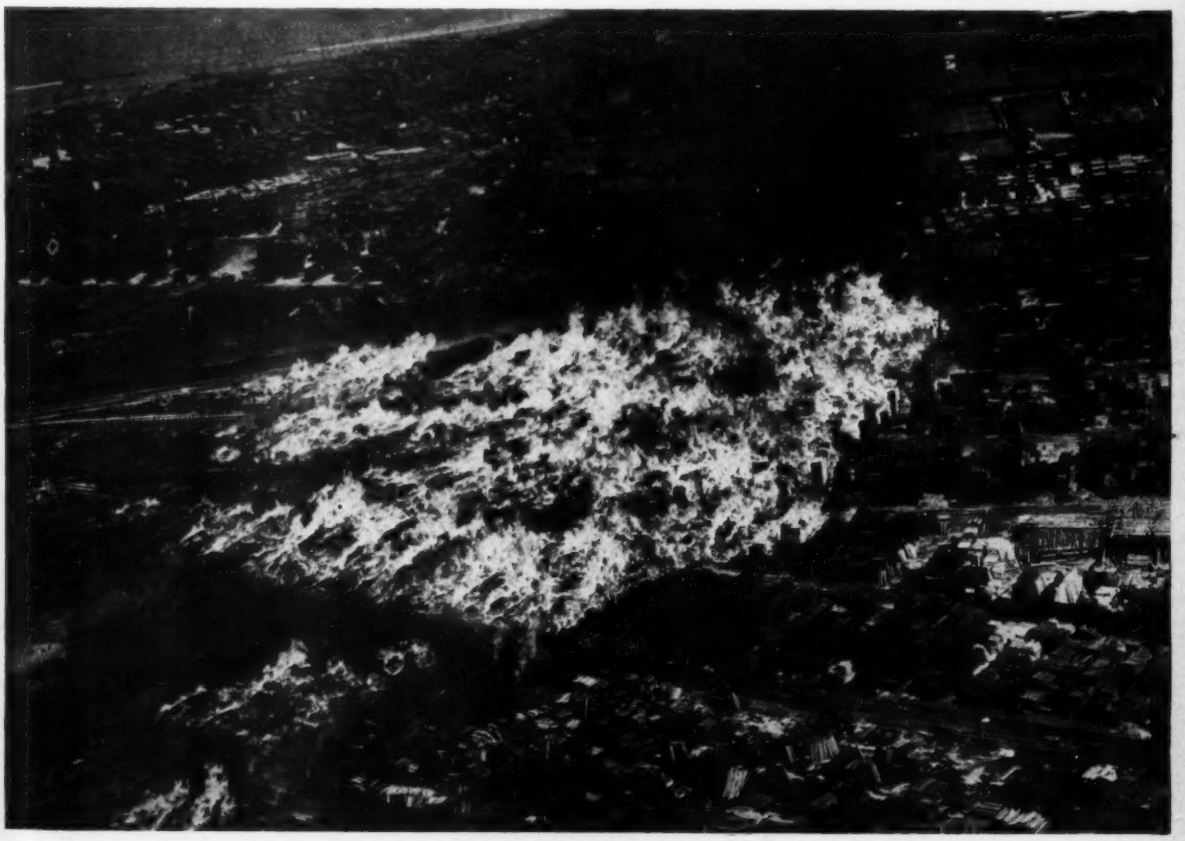


Photo by Yeoman & Co.

The West Hartlepool, England, Fire at Its Height

Note vast quantity of piled lumber in left background and to the rear and the right of the fire. Despite the fierceness of the blaze and the great headway it had attained by the time the fire department was called, only thirty-eight per cent of the area was burned over.

pumping from the sea with incoming tide, number of jets in use, 12, two being from the sea; 500 additional military personnel requested, fire position precarious." Relay from the sea having proved successful, further pumps were ordered in.

The wind changed to the north-east at about 2 P.M. and caused the speed of spread in a southerly direction to be increased. Despite desperate efforts by all concerned, the gap was crossed by flames at this end, and Chief Officer Hall ordered the evacuation of the southern-most section of the stack yard. The soldiers then commenced to reduce the height of those stacks in the path of the fire while firemen were positioned so that the full strength of their jets could be used in protection of nearby residential property which was now threatened. This property comprised a row of houses, occupied by retired railway personnel and two bungalows, and in view of the threat the occupants were evacuated.

Pumps were increased to 40 and deluge sets ordered in. Plants were made to increase the effect of the relay and to continue it throughout the night, and for this purpose searchlights from Territorial Army and Royal Air Force units were obtained; two tractors were also borrowed to move pumps over the wet sands. As quickly as the pumps arrived they were placed in position and by 8 P.M. 33 lines of hose, six of which supplied three deluge sets, and the remainder 1-in. jets, were in use. All were centered on protecting the houses and the fire break between the remaining stacks and the blurning area. It was now possible to direct strong jets on to the burning timber in addition to damping the involved area. The planning was successful and at 3.16 A.M. on April 29, it was possible to send the Stop message to headquarters and 50 per cent. of the military personnel were returned to their depot.

Home Secretary Visits Fireground

When Chief Officer Kettlewell resumed command at 7 A.M., a survey of the ground revealed numerous timber railway buffers still burning and large areas of the ground (a built-up site of cinders, ashes and waste coal) well alight. As these fires still threatened the standing timber it was necessary to have the bulldozers turn over the ground, in some cases to a depth of over 6 ft. before all the burning embers were finally removed. Meanwhile firemen damped down all the other hot spots.

During the afternoon the Home Secretary (Mr. J. Chuter Ede) addressed a meeting in the Council Chamber at West Hartlepool. In attendance were the Mayor, members of the Watch Committee, the Town Clerk, Chief Officer Kettlewell, fire and police officers of County Durham, Army officers, and heads of other responsible departments. Mr. Chuter Ede congratulated all those present on the excellent liaison and co-operation which had been apparent throughout the entire operation. He afterwards visited the site and spoke to many firemen and other persons on the fireground, expressing sympathy for the suffering they had endured and admiration for their excellent work.

Whilst some 25,000 standards of timber and 38 railway wagons were destroyed by fire, it should be noted that 40 acres of closely-stacked timber in the path of the fire were saved. The Carr House site had been surveyed some months previous to the fire and Brigade officers, officials of British Railways and of the Timber Control had met on several occasions to consider the improvement of fire protection schemes. As a result of these meetings, work had already commenced on the provision of roadways, better spacing of stacks and improvements in the internal water supplies. Unfortunately, this work had not proceeded far enough to be of any benefit when the fire occurred. Earlier, Mr. Kettlewell had expressed the view that the almost inaccessible position of what was ultimately the involved site would make large-scale fire-fighting operations virtually impossible and, therefore, means of access were of paramount importance. In this connection, it is of interest to record that there have been three other fires in the same yard since this one, each one of which had the same hold before the arrival of the Brigade. In all cases, however, they were situated quite near the roadway—consequently control and extinguishment could be effected without further loss.

Photo by Northern Daily Mail

Relay Pumping from the Sea at West Hartlepool Fire

Relay Pumping from the Sea at West Hartlepool Fire Trailer pumps were placed at water's edge to supply larger units stationed inland. West Hartlepool, a city of 15,000 population, is located on the eastern seacoast of northern England.

Photo by Northern Daily Mail

West Hartlepool Firefighters Cover Exposures

The fierce heat of the lumber yard fire endangered neighboring houses and the occupants were evacuated. But a good "stop" was made and dwellings were saved.

Possible Causes of Fire

Contributing largely to the success of fire-fighting operations was the constant co-operation of all services and adjoining local authorities. After the predetermined assistance had been requested it was only necessary to ask for men, machines, equipment, and so forth, from any of the fire authorities in the north-east, to have it despatched immediately. Many of the neighbouring chief fire officers attended, each with a complement of their officers, and the assistance and advice thus available was most valuable. A voluntary crew, headed by Chief Officer A. A. Ashton of Salford, also reported and did yeoman service.

Careful and detailed investigations have been made in an endeavour to ascertain the cause of this, and the subsequent fires. It appears that the most likely accidental cause would be a carelessly-discarded cigarette-end or match, contributory factors being the accumulation of sawdust near sawbenches, the dryness of the season, and the fire being screened from view in its incipient stages by the height of nearby stacks.

Washington Fire and Plane Crash Keep Rescue Units Busy

Many Units from Neighboring Communities Cooperate Following Crash of Transport Plane

Editor's Note—**The editors are indebted to correspondent Irving Wallach Johnson, Tacoma Park, Md., and to the District of Columbia Fire Department, Chief Engineer Joseph A. Mayhew, and to Alexandria, Va., Fire Chief Bernard Padgett, for the factual data for this account of the operations of the fire and rescue forces at the New Post Office Building, and the tragic crash at the National Airport.**

THE 24-hours beginning at 10:00 A.M. on November 1, last, were packed with action for the fire and rescue forces of the District of Columbia and neighboring areas, as fire, explosion and an aircraft crash disaster struck within an hour of each other.

Unusual Fire Necessitates Evacuation of 3,000

An unusual fire in the same Government structure that was visited by another serious blaze on Dec. 13, 1935, routed more than 3000 persons at the New Post Office Department Building Twelfth St. and Pennsylvania Avenues, on the morning of Tuesday, Nov. 1, 1949. Several explosions punctuated the fire in the $11,700,000 structure, blowing out walls, bringing down ceilings and showering the building's courtyard with glass, paper and debris, while volumes of smoke poured from the eighth-floor windows.

The explosions, and resulting fire, apparently originated in the transformer and master switch room of the eighth-floor section of the building which houses Postoffice Department workers, including the department's reported $50 million stamp collection on the sixth floor—as well as the offices of the Federal Communications Commission. The Benjamin Franklin downtown P. O. is located on the ground floor.

A Government engineer blamed the fire on a short circuit which ignited the oil in one of four transformers in the room, causing an explosion, which was followed shortly later by another and more serious blast. The explosions, smoke and water did more damage than the actual fire.

The first alarm (telephone) was received by the District Fire Alarm Headquarters, Fourth and Douglas Sts., at 9:58 A.M., and Box 187 was struck, summoning Engines 2, 16, 6 and 1; Ladders 3 and 1; Rescue 1; Ambulance 1; Battalion Chief of the 6th, (Acting) Battalion Chief J. R. Best, and Deputy Chief Millard H. Sutton.

There was little evidence of fire as first-due companies rolled in; some windows were blown out; glass was scattered on the ground outside the building, and only a little light smoke emitted from a vent in the roof. Shortly the smoke increased in volume.

Although the lights in the building went out almost at once, some elevators continued to operate slowly for several minutes. Many persons were evacuated from the upper part of the structure by this means but the majority took the stairs, to meet firemen working their way upward with hose and other equipment.

Superintendent Has Narrow Escape

An electrician, W. F. Airey, who located smoke on the eighth floor and was investigating when he heard an explosion, turned in an alarm and started

Official Photos D. C. Fire Department

Left: Scaling Ladder Used with Aerial to Reach Eighth Floor Window at Washington, D. C., Post Office Building Fire. Right: Newly Developed Respirator Used in Resuscitating Overcome Firemen at Washington Fire

downstairs to warn employes. He encountered firemen and informed them the explosions were apparently electrical in nature. He escaped without injury.

Aaron Train, Building Superintendent, was not so fortunate. He was one of the first to suffer from the explosion. He had been called to the Eighth floor because of electric trouble, and smoke in the corridors. He was caught in the Eighth Floor corridor by the first blast and thrown 50 feet. Shortly after, the second and most severe explosion knocked down a wall and threw him in a different direction. He was trapped by dense smoke but managed to wave a handkerchief from a barred office window at the very top of the building. Reporters saw his plight and notified firemen who quickly raised a metal extension ladder. This reached the Seventh floor but fell short of Train's window by one story. Laddermen managed to reach his window over a scaling ladder, which was hooked into the window, over the cornice. When firemen finally reached the window, Trail had disappeared. It was learned later that other firemen, equipped with gas masks, had managed in enter his room, place a mask on him and lead him downstairs. Train was hospitalized for lacerations and abrasions.

A Two-Hour Battle

Fire fighters fought the stubborn fire for two hours before being satisfied it was safely controlled. In the fight, which was waged with hand lines from the interior and exterior via ladders, the firemen took considerable punishment and a number were overcome. Others were injured by flying debris in the second blast. Fireman Donald Corrigan, 37, of Ladder 1, was hospitalized for cuts and lacerations; Fireman John Harris, 33, Rescue 2, also was hospitalized, from injuries received when he was thrown down a stairway by the explosion. Fireman Richard Jamison, 24, Ladder 1, was treated for cuts. Treated and released at hospitals also were James L. Kish, 32, Rescue 2, contusions and smoke asphyxiation; Sgt. Fred G. West, 34, Engine 16, smoke inhalation; Warren Kelley, fire marshal's office, contusions; George E. Deaner, 40, Rescue 1, hand injuries; Quentin Cyras, 29, Engine 7, laceration; and Robert Farrington, 35, a reporter with the Associated Press.

Sgt. Joseph H. Mattare, 36, of Engine 13 was overcome by smoke and received an injured shoulder. Dr. W. B. Claudy, Fire Department surgeon, said the Sergeant might have died if a respirator had not been applied for 20 minutes at the scene of the fire

Additional Alarms Radioed

A second alarm was radioed by Chief Best at 10:12 A.M., which brought Engines 3, 13, 23 and 4; Ladder 4, 5; Rescue 2, and Ambulance 2, with Battalion Chief A. C. Kefauver, Chief Engineer Joseph A. Mayhew, Fire Marshal Roberts, Superintendent of Machinery Boswell, and Drillmaster Bowen. Between that time and 10:18 A.M., these companies were transferred: Eng. 8 to 16; 24 to 6; L 14 to 3; Chief of the Fourth Battalion (Whiteman—acting) relocated in Battalion 6. At 10:25 A.M. Water Tower Tender 1 was called.

At 10:31 a third alarm was sounded by Chief Sutton, via radio car. This called Engs. 16 (E 8), 6 (E 24), 7 and 12; L 3 (14); Water tower 1, and Battalion Chief of the 6th.—(Whitman acting). The following transfers occurred between that time and 10:52 A.M. to maintain adequate coverage for vacated areas: E 26 to 6, 28 to 1, 15 to 13, 14 to 12 and 10 to 16 (to serve as Water tender 2, when that reserve tower was placed in service.) Also L 15 to 4 and Battalion Chief C. Quick of the 2nd to the 6th.

Dr. Claudy set up first aid headquarters in the P. O. Building's first aid room on the Seventh floor. He had 10 men out at one time, largely due to smoke, it is reported, but all recovered quickly except Sgt. Mattere. Dr. Claudy maintained communications with the chiefs and Rescue Squads by having a F.C.C. volunteer, acting as an emergency operator, keep a telephone line open to the fire alarm headquarters radio operator on Station WAKY. The telephone operators in the FCC switchboards were ordered from the building but it is said some remained at their posts.

Chief Donald Dunnington of the Bethesda-Chevy-Chase (Md.) Rescue Squad responded to the Post Office fire at 10:31 A.M. with Rescue Squad 1 and Ambulances 1 and 2, following the third alarm, and aided in handling injured firemen, although not summoned by the District Fire Department.

An estimated crowd of over 30,000 persons crowded the area to watch activities. They were kept from the immediate fire zone by 60 policemen and all available motorcycle officers under direction of Superintendent of Police Maj. Robert J. Barrett and Capt. Howard V. Covell. District Commissioners John Russel Young and Brig. Gen. Gordon R. Young huried to the scene at 10:45 A.M.

Fire Chief Mayhew and Police Chief Barrett were still at the Postoffice fire when the fire department received word from the control tower at National Airport of a serious aircrash at that location. Both left at once for the Airport accompanied by a Battallion Chief, a Rescue Squad, a Fire Department Ambulance and 15 motorcycle policemen.

Immediately following the Postoffice fire an investigation was instituted to determine the cause, of the fire and explosions, the extent of loss of valuable FCC papers and documents and the property damage, estimates of which run as high as $500,000.

No Fire, But Fire Forces Busy at Plane Crash

Shortly before 11:45 A.M. on the morning of Nov. 1, and seconds from a safe landing at National Airport, an Eastern Airlines DC 4, four-motored air liner was struck by a P-38 fighter plane and crashed, killing all 55 passengers and crew of the liner and badly injuring the Bolivian pilot who was flying the smaller plane.

No fire resulted from the crash, the death toll in which exceeded by two the worst previous airplane disaster, but fire, medical and rescue forces from miles around were mobilized to aid in the recovery of victims and search for any survivors.

The collision occurred through a misunderstanding of signals at about 1000 ft. altitude, on the edge of the airfield. The big ship broke in two, part of it being submerged in the Potomac River and part being strewed along the shore. The smaller ship fell into the River where the pilot was rescued alive by the Bolling Field Army crash boat.

Although no fire resulted, fire forces and other services immediately went into action, together with volunteers in the rescue work. The vast mobilization of emergency services in this disaster is of interest.

Chronology of Alarms

The chronological log of the disaster goes something like this:

11:45 A.M., Eastern Airlines plane due to set down at National Airport The collision occurred only a few moments before that time.

11:45 A.M., Alexandria, Va., Fire Department Rescue 1, Ambulances 1 and 2, with Chief Bernard Padgett, respond to reported scene of crash. Alarm received via Alexandria Police Radio Scout car.

11:48 A.M., Washington National Airport Fire Department responded with the following: No. 155 crash truck, 1000 gal. tank with H.P. fog and foam; No. 125 Hardie crash truck, 300 gal. tank, H.P.; 1-500 GPM American LaFrance pumper; 1 Jeep, 250 Lb. Ansul Powder; C12 Ambulance and Chief Charles F. Petellat. Alarm via National Airport Control Tower.

11:48 A.M., M.A.T.S. Army Airport Fire Department responded with the following: No. 155 Crash Truck, 1000 gal. tank, H.P.; 1-750 GPM Pumper (make not given) with Chief Raymond Peake.

11:50 A.M. Alexandria, Va. Fire Department Engine 4 [called via Alexandria Police].

11:50 A.M. Penn Daw, Va., Fire Department Ambulance 1.

11:50 A.M. Franconia, Va., Fire Department, Ambulance 1.

11:50 A.M., District of Columbia Fire Department, Chief Engineer Joseph A. Mayhew and DCFD Fireboat [called via Airport Control Tower].

11:59 A.M. Arlington, Va., Fire Department, Rescue 5, Ambulance 4, Engines 4 and 5 (two pumpers) under Chief A. C. Scheffel.

12:00 A.M., Prince Georges County, Md., sent the following:

- Bladensburg, Md., Ambulance 1 and 2;
- Branchville, Ambulance 1;
- Glenn Dale, Ambulance 1;
- District Heights, Ambulance 1;
- Oxen Hill, Ambulance 1.

12:01 P.M. Montgomery County, Md. sent the following:

- Silver Spring, Rescue 5;
- Takoma Park, Ambulance 14;
- Kensington, Ambulance 20;
- Glen Echo, Ambulance 53;
- Bethesda-Chevy Chase, Rescue 3, Ambulances 1 and 2;
- Chevy Chase Fire Department, Engine 60.
- Gaithersburg Ambulance 41 transferred to Chevy Chase F. D. Hq.

Alarms to Prince Georges Control Center, Hyattsville, Md., and Montgomery County Fire Board, Silver Spring, Md. Request of District of Columbia Fire Alarm Hq. for all available rescue squads and ambulances.

12:06 P.M., District of Columbia Fire Department Rescue land Ambulance 1. A total of 43 pieces of equipment, as follows: 5 Rescue squads, 21 ambulances, 11 pieces of fire apparatus, 1 fireboat, 5 fire chiefs' cars.

HEAVY FIRE LOSS IN DALLAS AS PLANE CRASH INVOLVES BUILDINGS

Firemen Face Serious Situation as DC6 Ignites Hangars; 28 Killed in Crash

A Staff Report

THE worst airplane crash in Texas history occurred at 5:45 A.M., Nov. 29, 1949, when the 60-passenger DC6 American Airlines New York to Mexico "Aztec," crashed into two buildings at the edge of Love Field, Dallas, killing 28 of the 46 passengers and crewmen aboard.

The exact cause of the disaster has not been announced by the CAA and other investigators; it is known the plane had experienced engine trouble for more than an hour when it came in toward Love Field for a landing. The Capt., Laurens Claude, had shut down one engine and feathered the prop' because it had been backfiring and running roughly. At the south edge of the Field, the left wing of the plane dipped; another engine went out and the remaining two were evidently unable to lift the ship, which veered to the left from the line of flight, over the north-south runway.

In its swerve, it crashed into the classroom and engine repairshop of the Dallas Aviation School, cut through high tension power lines, to pile up against the plant of the Magnaflux Corporation, a metal-testing firm at 324 Love Field Drive. The wreckage and parts of the hangar promptly burst into flames.

That anyone was able to survive the crash is considered a miracle by those who observed it. All but one of the fatalities met death in the plane, the single exception succumbing shortly after reaching Parkland Hospital, to which most of the injured were taken. All of the male crew members survived but both stewardesses perished.

A police sergeant, who observed the crash, said "it looked like the whole north end of the field was afire. It was a long, narrow fire, burning high." There were intermittent explosions which tossed wreckage into the air.

The first notification of trouble was received by the Dallas Fire Department at 5:48 A.M., when the control tower at Love Field asked that fire equipment stand by for a possible crash. Within the minute, the control tower called back that the plane had hit.

While this alarm was being given, two patrolmen in a cruising police prowl car, who saw the plane crash, used their car radio to broadcast an alarm, and calls for help.

At 5:50 L. L. Benningfield of the Love Field Station, ordered a second alarm, which started additional fire forces for the field. Three minutes later, Battalion Chief B. C. Lester arrived and sounded a third alarm. As the fire continued to rage, he ordered a fourth alarm at 6:07 A.M.

These alarms brought nine pumpers, two ladders, a rescue and a salvage truck with 60 firemen, from eight stations. Fire Chief C. N. Penn, who responded on the second alarm, took command of fire and rescue activities.

Fire fighters used both straight streams and water fog to control the hot fire in the remaining sections of the plane and in the involved structures. Other firemen, not operating hose streams and fire equipment, worked with police in removing the dead and giving first aid to the injured.

The emergency placed a heavy burden on fire department communications. Fire alarm dispatchers J. T. Tune and W. B. Harris, on duty at the time, were soon joined by Chief Dispatcher O. D. Miller. Both fire and police communications systems were used to set in motion the Dallas and district disaster forces. Five two-man police squads, six detectives and additional supervisory officers were hurried to the area, where crowds of the curiosity seekers formed rapidly. Parkland Hospital was alerted and patrolmen were dispatched there to handle the crowds. Eleven ambulances were ordered to the scene from Dallas funeral homes and, later, two from Grand Prairie.

Besides the total loss of the costly DC6, fire damage to hangars and other buildings at the field would reach $90,000 according to Capt. Tony Sadberry of the fire marshal's office who released these figures; a hangar at Air Associates, 3214 Love Field Drive, collapsed and partially burned, loss $18,000; Loss to Dallas Aviation School was given as $55,000 and to Magnaflux Corporation at $17,000.

Plane Wreckage at Love Field, Dallas, Tex.

Damaged Structures at Love Field, Dallas, Tex., Following Crash of DC-6 Airliner. Wreckage of Plane in Foreground; Dallas Aviation School Buildings in Background

TOLEDO FIRE DEPARTMENT HAS SMOKIEST BLAZE IN 40 YEARS

Masks and Smoke Ejectors Used as Smoke and Fumes Fell 30

A Staff Report

ON ONE of the hottest days of last summer, the Toledo, Ohio, Fire Department was called upon to fight what Fire Chief Patrick Daly characterized as the smokiest fire in his 40 years experience as a fire fighter. Thirty of the 85 firemen who struggled to control the stubborn 5½-hour blaze were treated in hospitals, most of them for smoke poisoning, and many others received first aid at the fire.

The property involved, an old 3-story brick and wood joist structure with reconstructed front in the 600-block of Adams St., on the edge of the city's retail shopping district, was occupied by a luggage shop, and jewelry and shoe stores on the ground floor and by a dance studio on the upper floors. Heavy stocks of rubbers, shoes and other new merchandise were stored in the basement, which had no dividing walls or fire stops. A fire wall, however, helped prevent extension of the fire to the Gates Building on the West, and firemen were able to keep the blaze from entering the three story building adjoining on the east, although smoke and water damaged both these adjacent structures. The basement and first floor occupancies of the fire building were burned out as was the roof and part of the top floor. Damage was heavy also to a part of the second floor. The total loss was reported at $196,000.

According to the late Earl Walterschied, Chief Inspector, Fire Prevention Bureau, the fire started in the basement, from defective wiring. Feeding on the combustible stocks, it spread throughout the basement area, then involved a rear ventilator shaft to communicate to the attic and roof areas, getting by firemen who were watching for it in the heavy smoke on the second and third floors.

Telephones Fail

The fire was first noticed by the wife of the proprietor of the shoe store who attempted to telephone an alarm but found her phone dead. She ran to the jewelry store and its owner also failing in an effort to telephone an alarm, ran to and pulled the box at Adams and Erie Streets. This alarm was received by the Fire Alarm Headquarters at 10:28 A.M.

A second alarm followed 10 minutes later and special calls for two pumpers each were put in at 11:15 A.M., 11:45 A.M., 11:47 A.M., and 11:50 A.M. Total fire forces at the scene included 8 pumpers; 4 ladder trucks; two rescue units and miscellaneous equipment.

Efforts to penetrate the basement without masks were futile and men were then sent in with breathing equipment in an effort to determine the extent and location of the fire, while lateral ventilation was undertaken at store level. Capt. William Reichard and Lieut. William Hanson donned smoke masks and penetrated the basement under 615 Adams but were overcome when, in some manner smoke penetrated their masks. Both were able to escape and, after oxygen treatment on the spot, Capt. Reichard was taken to St. Vincent's Hospital. Previously he had been made ill by smoke when with his men he attempted to reach the fire by way of the luggage shop stairway.

Smoke Ejector Being Brought Into Operation at Toledo Fire
A salesman's demonstrator left with the Toledo Fire Department is put into use in effort to overcome smoke and heat handicaps during 5½-hour fight.

The fire gradually ate through the store floors, and at 12:45 P.M. flames shot through the roof of the building. Ladder pipes were brought into play at the front of the structure and these, with the numerous hand lines operated at other vantage points, eventually controlled the fire. Firemen, however, remained at the scene for 24 hours.

Smoke Ejector Used

When the openings made by battering rams and forcible entry tools were ineffective in venting the lower areas of the building, firemen placed in operation a portable smoke ejector in an effort to speed removal of the pungent smoke. Providentially, the unit had been left with the department only a short time before, for the latter's experimental use. It received a good baptism and, although because of the volume of fire and smoke in the involved stores and basement it was unable alone to clear the area, it gave a good accounting of itself. Chief Daly, writing FIRE ENGINEERING, said: "We did use a smoke ejector left by a salesman at the fire on Adams Street. I am convinced that the smoke ejector would be very useful at a small smoky fire, but the volume of smoke from the Adams Street fire was so great that one ejector could not handle it. We did not have a discharge tube to carry the smoke away from the scene, either."

Mercantile Fire Poses Problem of Ventilation for Toledo Firemen
Extending by way of an undetected rear ventilator shaft, a stubborn, smoky basement fire communicates to roof areas. Thirty of eighty-five firemen in stubborn struggle required medical attention. Picture taken shortly before fire broke through roof.

As the fire persisted the crowd of spectators grew until at the noon hour height of the blaze, police estimated over 10,000 persons were jamming into the area. At 1:00 P.M., 23 additional police were rushed to the scene to move back the crowds and direct traffic, slowed by the drifting smoke.

At that time 13 hose streams were delivering water at the rate of about 5,000 gallons per minute on the fire, according to Superintendent Louis Steffan.

In addition to extra police and emergency crews of utility, telephone and other services, two Red Cross Disaster units were sent to the scene.

FIRE IMPROVEMENT PROGRAM PAYS OFF AS TOWN DEVELOPS

Enterprising Volunteers Keep Well Ahead of Growing Demands Upon Their Services

By Robert H. Richards
Secy.-Treas., Bishop Volunteer Fire Dept.

THE Bishop Volunteer Fire Department of Bishop, California, like many fire suppression groups, waged an uphill battle for adequate fire equipment to keep pace with a growing area. Even before the town was incorporated as a City, the Bishop Hose Company, as it was known prior to 1903, gave the village its limited best in fire protection.

As the years rolled by, the volunteers had their ups and downs, but after each reverse they managed to advance. Bishop's first motorized equipment was obtained in 1912, ten years after the town had become a City, and residents and volunteers alike were justly proud of their Pope-Hartford Engine, complete with chemical tanks, hose and all other accessories, plus hard rubber tires which required replacing after the difficult trip over the mountains and rugged country from Reno, Nevada, the nearest railroad. The Pope-Hartford fulfilled the needs of the town up to the time when the night policeman stripped the gears in responding to a fire call. Repairs were never made and in due course the town governing board obtained a Model T Ford and transferred the hose bed and equipment to the new chassis.

Needless to say, the "new" engine wasn't much of an improvement as the overloaded rig was just able to traverse the city streets. During this time Bishop continued to grow and it experienced some of its worst fires, with the Model T putting in an appearance under its own power except when mechanical difficulties required strong backs and a tow rope.

It was evident, long before the Ford was replaced, that the community was in dire need of a new engine. The straw that broke the camel's back happened one afternoon in 1932 when the venerable equipment rounded the main corner onto North Main Street en route to a fire. As the engine cleared the intersection, three tires gave up the ghost and the truck faltered to an inglorious stop near the curb in front of the Bishop Drug Store, where the then Mayor was employed. It remained inert there the balance of the day and as the fire to which it had been responding had been doused with a garden hose, the Mayor took a terrific ribbing. None of the volunteers admitted any connection with these strange happenings.

That night the Town Board met in special session and soon thereafter Bishop secured its first modern fire engine built on a Reo Speed Wagon with an American Marsh U-34 front-mount pump. This unit, Engine #1, is still in service and was the sole piece of fire equipment in 1943 when the volunteers again sought more equipment to keep fire protection in line with the changing conditions.

The Volunteers recognized that the City was financially unable to buy new equipment—a condition not unknown to most town and rural areas. Bishop wasn't unique, but something had to be done. In the emergency it was learned that the Government's Japanese War Relocation Center at Manzanar, near Bishop, had been almost dismantled in 1944 and that the fire equipment at the Center would be declared surplus. The City was prevailed upon to make payment for the apparatus, a Ford V8-500 GPM Waterous two stage pumper completely equipped, plus reserve hose.

The department then engineered a campaign to raise funds by popular subscription. The support was most generous and the City was reimbursed the money advanced, besides enabling the members to repaint the truck, obtain special tools, including a forty foot aluminum extension ladder which was seriously needed and ready the fire station for additional apparatus.

The members also recognized the need for apparatus to afford fire protection to the growing area surrounding the City. They commenced a vigorous word-of-mouth campaign for the residents of the rural area to form a Fire District, which was finally accomplished. As Bishop is the hub of activity, the volunteers agreed to respond with the new engine, housing it adjacent to the City Station.

The new apparatus arrived in October, 1948, and consists of a 500 GPM three stage Hale Pump, 500 gal. water tank, 1000′ of 2½″ hose, 300′ of 1½″ hose, twin high pressure hose reels with Hardie Fog Guns, 1½″ line all mounted on a sturdy chassis, with other accessories.

The final step to complete the department's modernization equipment program was now ready for execution. If it was successful, there would be a three engine response in the City, a two engine response to the Rural Fire District and a one engine response to the isolated areas in the county beyond District boundaries.

A letter was composed and sent to all residents in the northern end of Inyo County requesting support in the second fund raising program. This project was commenced in December, 1948, and with wholehearted efforts of the membership, and good support from the local people, sufficient funds were received. Orders were placed for the many items required to properly equip a fire truck, with the result that after much hard work Engine #3 was placed in service in August of this year.

American Marsh was requested to furnish the latest pump and fog gun equipment. A UA-50 pump was sent and installed, with twin hose reels and accessories, on a suitable chassis. The new unit will roll first on all City calls and will accompany the rural truck into the District, besides answering calls from beyond these boundaries to protect isolated areas.

The Bishop Fire Department hopes someday to improve its fire communications by acquiring two way radio, more smoke and gas masks and still other appliances. Meanwhile its members look back over the last four years with considerable satisfaction, for they have seen their ambitious plan definitely taking shape.

Apparatus and Some Members of the Bishop Fire Department Who Provide Service to the City of Bishop, Bishop County Rural Fire District and Nearby Areas

Engine No. 1 (left), purchased in 1933, was the sole unit when the volunteers launched their modernization program in 1944. Engine No. 2, next in line, was obtained from Manzanar by popular subscription. This truck did yeoman duty in November, 1947, at the Big Pine Disaster, when the center of the nearby town was nearly destroyed by fire. Engine No. 3, next in line, is the newest addition, placed in service in August, 1949. Fire Chief Horton, with Assistant Chiefs Walter Primmer and Loren Huffman, stand in front of the rural apparatus.

HARRISONBURG FIREMEN TRAIN LOCAL HOSPITAL PERSONNEL

Fire Chief Kenton J. Long Finds Training Program Well Received by All Concerned

A Staff Report

RECENT tragic and costly fires in hospitals, nursing and convalescent homes, and institutions, have focussed attention on the hazards of these occupancies and the need for better fire preventive and protective measures.

Following the St. Anthony's Hospital holocaust in Effingham, Ill., on April 4, 1949, a number of states took action to prevent repetition of such tragedies in their own communities. Others have legislation pending which it is hoped will accomplish the same results. In addition, the National Board of Fire Underwriters has commenced an inspection of the 6300 reported hospitals in this country. This will require nearly two years, it is estimated, before all the surveys have been made and the resultant data compiled, and before the resultant recommendations can be made.

Meantime, the problem of improving the protective and safety measures in and connected with the existing occupational hazards is of concern to every fire chief in whose area such institutions exist.

It is obvious that, where hospitals are already built and occupied, the task of instituting adequate safety measures is far more of a problem than where a new building is being built, or is to be erected. Many fire officers consider the most pressing problem in this field of fire safety to be correction of existing evils in the old structures without saddling the institutions themselves with attendent impossible financial and other burdens. It is one thing, they point out, to pass laws to prevent fires and loss of life, but it is another thing to make those laws retroactive.

In this situation many fire officers are not waiting for laws and ordinances but are centering their immediate attention on furthering protective measures among the present hospital or institution staff. Here they have in may cases found ample field for their endeavors. In general, such staffs are undermanned, have little or no fundamental or advanced training in fire and safety measures, they lack leadership and the individuals have never been properly trained in what to do when faced with an emergency. In a word, they are ignorant of what should be done when fire strikes, and of the proper use of such fire protection facilities as they may have at their disposal in time of emergency.

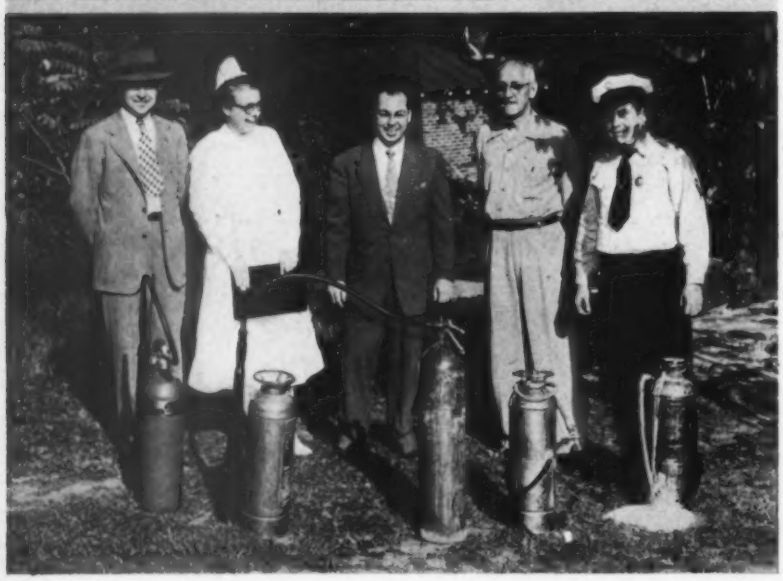
Such was the situation that faced Fire Chief Kenton J. Long of the Harrisonburg, Va., Fire Department. Harrisonburg has a population of about 10,000 (est. 1948); possesses in the Rockingham Memorial Hospital an institution which in many ways is typical of cities of about that size, and in other ways is above the average. This is particularly true in the number of staff personnel which operate the hospital.

The Rockingham Memorial Hospital has 109 rooms, of which 65 are used for patients. A new three-story addition is under erection. This will be of latest type fire resistant construction and will provide 86 more rooms, of which 56 will be used for patients.

The present staff of the hospital consists of the following: General Staff, 36; Student Nurses, 60; Nurses Aids, 25; Teachers and Supervisors, 13; Orderlies and other help 100. In all, this appears to be a fairly large staff for a 109 room hospital.

Early in the Spring of 1949, Fire Chief Long and Deputy State Fire Marshal A. J. Bell inspected the Rockingham Hospital and at that time Mr. C. F. Loftus, administrator for the hospital, discussed with Chief Long the question of training the nurses and other hospital employees in the procedure to be taken in the event of fire in the hospital, the proper use of fire extinguishers and in evacuation of patients.

Although lecture instruction and blackboard work are good enough in their way, and place, Chief Long is a staunch believer in the "training-by-doing" method. He therefore suggested to Mr. Loftus that if the latter would arrange for the classes he the Chief, would



Top: Demonstrating the Use of the Carbon Dioxide Extinguisher (Left to Right): Miss Patsy Wilkins, R.N., and Laurence Oliver, Engineer No. 1, Fire Department.

Bottom: Those Who Cooperated in the Rockingham Memorial Hospital Fire Fighting Drills (Left to Right): Nelson Liskey, Business Manager; Miss Virginia Reilly, Head Nurse; C. F. Loftus, Administrator; Kenton J. Long, Fire Chief, and Laurence Oliver, Engineer No. 1, Fire Department.

Rockingham Memorial Hospital, Harrisonburg, Va.

have members of the fire department demonstrate the use of the various types of fire extinguishers maintained in the hospital. This was quite satisfactory to the hospital authorities.

Requests for the demonstrational-training were received on September 15th last, and the first class was held on the 19th. Over 40 nurses and other personnel were included in this group. On the 21st, the second of the classes was held, with 35 more attending. The last of the sessions was held on the 27th, and this was attended by all the personnel that had not previously attended.

The demonstrations were conducted under as nearly actual fire fighting conditions as possible. An 8 ft. piece of wall board was used, and this was soaked in kerosene, which made a hot fire. All those attending the sessions were given opportunity to use the extinguishers. That the program was well received was attested by the numerous requests for a repetition of the affair.

Beginning October 15th a series of classes on evacuation was started. Floor plans of the hospital were prepared by Chief Long and these were used in mapping out the routine and procedures. Further classes on evacuation will be held about three or four times a year, so that everyone connected with the hospital will know what to do in case of fire.

This isn't an elaborate or costly program. Chief Long believes that every fire department charged with protecting hospitals and like institutions could well afford to institute such a plan. This has a salutory affect not only on hospital staffs, but on members of the fire department, who should naturally play a major part in the sessions.

Appointments to N. Y. Fire Advisory Board

Thomas W. Ryan, Director, N. Y. State Division of Safety has announced the appointment of John J. McCarthy of Belle Harbor, L. I., former Chief of the New York Fire Department, and James E. Lynch of Glenwood Landing, N. Y., Assistant Fire Marshal, Nassau County, to the State Fire Advisory Board.

Retired Chief McCarthy is presently Fire Prevention Consultant of the New York State Hotel Association. Marshal Lynch will fill the post on the Board formerly held by the late Roswell Miller.

Hazards of Chlorine Dioxide

A newly developed bleaching process which is being used by flour manufacturers and fat rendering companies and may be used by the soap industry, sugar refiners, and many other industries, has introduced new fire and explosion hazards which are discussed in a report just issued by the Research Division of the National Board of Fire Underwriters.

The report is titled "Precautionary Fire and Explosion Safeguards in the Use of Chlorine Dioxide for Industrial Bleaching." It offers detailed recommendations for the use of chlorine dioxide, which is spontaneously explosive in concentrations over ten per cent, and for safe handling and storage of sodium chlorite.

The report covers the theory of operation of the new bleaching process, design and construction of the equipment used, and safe installation and operation of typical units.

"These installations are presently found in a number of establishments where little or no previous experience has been had with chemical operations and critical process control," the report states. "Education of the operating personnel on the potential fire and explosion hazards is essential and should be made mandatory."

Research Report No. 7 is available without charge from the National Board of Fire Underwriters, 85 John Street, New York 7, New York.

Sacramento Firemen "Take a Feed" at Hot Oil Fire

A three-alarm assignment of Sacramento, Cal., fire fighters successfully prevented extension of a roaring hot fire, started when a gasoline trailer let go at a loading platform of the Richfield Oil storage plant in Sacramento. Firemen kept exposed tanks containing over 1,000,000 gallons of gasoline and oil from igniting, and tackled the fire in the loading station with foam and fog. At times it was necessary to protect the crews on the foam lines against the extreme heat, with a water stream, as shown. Losses were estimated at $120,000.

FIRE CHIEF URGES PREPAREDNESS AND TRAINING FOR INSTITUTIONS

Confusion and Panic Can be Averted by Simple Measures, Chief Coolure Believes

A Staff Review

Editor's note: **Mark Twain, the humorist, once said that everybody talks about the weather but nobody does anything about it. For some years there has been lamenting and discussion over the nation's heavy loss of life and property in hospital, school and institution fires, but not very much has been done about it. At least so reasoned Fire Chief George Coolures of Merced, Calif., who decided to do something about it.**

Chief Coolure reasoned that part of the trouble has been failure to properly plan, organize, and train for these emergencies. He reasoned that panic and confusion are the great evils in such emergencies and these can only be overcome by anticipating them and preparing for them; and so without waiting for "national plans" and corrective measures, he did what he could about it in his own city.

Lack of space prevents our publishing more than a digest of what Chief Coolure terms his "Fire Drill and Emergency Organization Plan for Schools, Institutions and Hospitals." The following outline covers only that section devoted to school protection.

ACCORDING to Chief Coolure of Merced, Calif., emergency preparedness plans for schools and institutions must be based upon the axiom that fire, panic and confusion "can happen here," and that these inevitable disasters can only be successfully met by careful pre-planning, which will include, in addition to inauguration of such structural improvements as are necessary to remove building and occupational hazards, the creation of simple emergency organizations within the institutional personnel, and the schooling of that personnel in what they should do when and if the emergency arises. Chief Coolure believes that inasmuch as the fire chief is one of those most vitally concerned with such emergencies and the outcome, he should take an active art in preparing such preparedness plans.

Fires in schools do happen and will continue to occur, as the records prove. Over a period of years there has been an average of five school fires a day, month-in-month-out. These fires, or at least the more serious ones, fortunately have not occurred during the hours when schools were occupied. However, enough of them have done so to emphasize the imperative need of preparing and training for them.

Any plan of preparedness should take into consideration setting up the necessary emergency organizational "machinery" and the methods for its functioning. Such plans, Chief Coolure believes, should be predicated upon these fundamentals:

1.) Orderly procedure and self-control must prevent confusion, excitement, and fear which are handmaidens to panic.

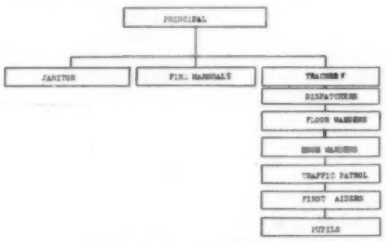
2.) Upon discovery of fire, or a report of possible fire, the fire department should be notified at once.

3.) Preparedness plans should encompass a concerted effort to confine the fire to the immediate section in which it originated, while the steps to notify the fire department, and to evacuate the premises in orderly fashion are being taken. This is only possible through pre-assignment of duties of school or institutional personnel and of their following out their assigned tasks.

4.) Once a plan is established all participants concerned should keep it fresh and alert by constant drilling.

Organization and Chain of Command

The plan calls for setting up what at first may appear a rather complicated organization of school personnel and pupils within the institution. Naturally this will depend somewhat upon the size of the school, number of pupils and staff.



Duties of the Principal

1. The principal will be held responsible for the safety of pupils and personnel in his school in time of fire or other emergency. He will be responsible for instituting preparedness plans and for their execution, which shall include responsibility for conducting fire drills at least once a month.

2. He shall see to the prompt notification of the fire department in the event of fire or report of fire.

3. He shall at all times have an up-to-the-minute roster at hand of all personnel, including teachers, and other school staff and visitors. Further, he should have an absentee report each morning.

4. In case of fire, fire drills or other emergencies, the principal will check with all floor wardens to see that their respective floors are properly cleared of all persons, beginning with the top floor.

5. Following this checkup, and satisfied that the building has been properly evacuated, the principal shall proceed to the outside where pupils and teachers are assembled, where roll call of each teacher's classroom shall be taken. He shall see that no one re-enters the building until he himself gives the order to do so, and he shall consult with the fire officer in charge before ordering re-entry.

6. Records of all fire drills shall be kept and a copy sent to the fire chief's office by the 10th of each month. He shall also notify the fire chief of any structural and fire defense changes or alterations in the procedures for evacuating the building.

7. The principal shall assign the positions of fire marshal, traffic patrol, personnel dispatchers, floor wardens and someone to act as his assistant.

Duties of Teachers

1. It is the primary duty of the teachers to see that they keep their pupils under control and direct them safely outside the building in an emergency. They shall quiet pupils and maintain order.

2. Teachers shall appoint (or nominate for appointment) their personnel dispatcher, room wardens, first aiders, traffic patrol, etc., and shall see that they are at their posts. After evacuation, teachers shall see that floor wardens, rooms wardens and first-aiders are with their groups, and accounted for.

3. Teachers will have an up-to-the-minute roster of their class and must make up an absentee roster for their own use, and a copy for the principal the first thing each morning.

4. Once pupils of the class are outside the building, they shall assemble in a pre-determined place, where the teacher shall marshal them and call a roll. When the principal asks for the roll call the teachers will report their room or class designation in this fashion: "ROOM NUMBER . . . PRESENT AND ACCOUNTED FOR." If any persons are missing, the teacher will report the condition as it exists and the principal will then take the appropriate action, if necessary sending wardens of the particular class back to check classroom and floor.

Duties of Dispatcher

The dispatcher acts as messenger for the teachers and principal, maintaining communications between them and floor wardens, room wardens, traffic patrol and first-aiders. Dispatchers sound alarms and report to principal for instructions.

In reporting a fire (to school authorities) they shall give the exact location and its extent.

Duties of Floor Warden

The floor warden shall direct evacuation of his floor or classroom. When his area is emptied, he shall await reports from the room wardens and if these reports are satisfactory, he orders them to join their own classes on the ground level. He then awaits arrival of the principal and reports condition of his floor. He takes orders from the principal and when ordered to rejoin his class on the ground floor, he proceeds via the proper exit, checking to see that no one has been left behind or is re-entering the building without authority.

Duties of Room Warden

One room warden shall be assigned by the teacher for each classroom. His primary duty is to see that all cloakrooms, storerooms and lavatories are empty and that no one is left behind in the classroom. He sees that first aiders have properly removed all sick or crippled pupils from the floor. When satis-

(Continued on page 64)

November Fire Losses

Destruction of property by fire in the United States during November totalled $53,116,000, an increase of 8.6 per cent over losses of $48,914,000 in October, according to estimates announced recently by W. E. Mallalieu, general manager of the National Board of Fire Underwriters, New York.

November's losses were only .8 per cent higher than losses of $52,949,000 reported in November, 1948.

The total destruction by fire for the first eleven months of 1949 is $600,257,000. A year ago the figure for the first eleven months totalled $641,717,000. This year's losses are off 6.4 per cent from last year's, on the basis of the 11-month figures.

Fire losses for the 12-month period ending November 30, 1949 are estimated at $699,645,000, as compared with $710,078,000 for the similar period ending November 30, 1948. This represents a decrease of 5.6 per cent.

These reported losses under fire insurance policies include an allowance for uninsured and unreported losses.

Chicago Fireboats Exceed Requirements on Tests

Chicago's two new fireboats, the Joseph Medill and the Victor L. Schlaeger, underwent their official acceptance tests on November 17 and 18 last. They are the largest Diesel direct driven fireboats in service, with full quarters for a crew of nine men. This Journal is permitted to report the following details of the tests through the courtesy of Fire Commissioner Michael J. Corrigan, and Chief Fire Marshal Anthony J. Mullaney, heads of the Chicago Fire Department. The tests were directed by James M. Gleason, Consulting Engineer and Edward J. Prendergast, Automatic Service Engineer, of the Department.

The hydraulic tests were held at the quarters of Engine Company 37, Chicago Fire Department, (Fireboat Fred A. Busse) Franklin and Wacker Drive, at the main branch of the Chicago River The Medill was tested on November 17, the Schlaeger the following day. Trials consisted of capacity and pressure tests of four hours duration.

The specifications and requirements of the capacity tests called for a delivery of 12,000 G.P.M. at a net pump pressure of 175 PSI. The pressure test, which was 70% of capacity, required 8,400 G.P.M. at a net pump pressure of 200 PSI. Both boats exceeded the requirements for capacity and pressure tests.

On a test which was not required by the contract, but which was made for the benefit and experience of the fire department, the Victor L. Schlaeger was tested to learn just what water could be delivered at a net pump pressure of 150 PSI. The delivery was outstanding, according to the engineers, who recorded 14,232 G.P.M. at that net pump pressure.

In the capacity tests (200 PSI), the layout for the Medill was as follows:

1—4" Nozzle on Forward Port Turret.
1—3" Nozzle on Aft Turret.
1—2½" Nozzle on Forward Strbd. Turret.

Total gallons delivered by all turrets were 10,232, ranging from 4,827 GPM at 105 PSI on the 4" Port Forward Turret to 2,260 GPM at 150 PCI on the 2½" Strbd. Turret. The tests started at 12:00 noon and readings were taken every 15 minutes.

In the capacity test, at 175 PSI net pump pressure, the layout was:

2—4" Nozzles on Forward Turrets.
1—3" Nozzle on Aft Turret.
1—1¼" Nozzle from 3½" discharge gate on Port Side.

In this test the Medill delivered a total of 12,488 GPM. The two 4" nozzles in forward turrets each delivered 4,608 GPM at 84 PSI; the after turret (3" nozzle, at 125 PSI) delivered 2,980 GPM and the port discharge gate (1¼" nozzle at 40 PSI) delivered 292 GPM.

Capacity test dicharges of the Victor L. Schlaeger were slightly greater at the 200 PSI level, at which the delivery was 10,560 GPM, with approximately the same layout as on the Medill. At 175 PSI, the delivery was 12,260 GPM.

Rookies Attend Fire

Eighteen young men from the Cleveland, Ohio, Fire Department's Academy were yanked out of classroom on their second day in school by Battalion Chief Emmet H. Byrne and hustled to witness a first hand 5-alarm plus smoky, torrid blaze in the plant of the Phil-Mar Corp., at 1566 E. 24th St., Cleveland, on Nov. 2, 1949. Then and there they got an instructive demonstration of what it takes to be a fireman.

The spectacular fire, which was fought by 19 pumpers, 5 ladders and various and sundry other equipment, manned by over 150 men answering five alarms and a special call, started in the 2½-story brick, glass and steel structure when a spark from a welder's torch lit in some flammables. Before a workman, standing by with an extinguisher could control it, the fire had taken hold among the cardboard and paper stocks, interspaced with lacquer, thinners and plastic material, much of it highly flammable.

According to accounts, three different types of extinguishers were used in the futile effort to control the fire, before an alarm was telephoned the department, which arrived to find much of the building involved with fire and heavy black smoke mounting into the sky. All 75 employees of the plant were evacuated safely from workrooms, and the offices on the second floor.

The first alarm was received at 1:42 P.M., and by 2:30 five calls for extra help had been sounded. Shortly after that, a special call for four pumpers and one additional ladder was sounded. At the height of the blaze, 19 hose streams were pouring water into the structure from the ground, ladders and other vantage points. Fire fighters encountered considerable difficulty ventilating the building because of the glass block construction. The heavy glass brick win-

Photo courtesy Cleveland Plain Dealer

Phil-Mar Fire, Cleveland, Ohio, at Its Height.

Photo courtesy Cleveland Plain Dealer

Cadet Firemen Observe Operations at Phil-Mar Fire

A group of new cadet firemen, who were attending the Department School when the Phil-Mar fire occurred, were taken to the fire to observe operations. This photo was taken after the fire was under control, and it shows the Chief of the Cleveland Fire Department, Elmer M. Cain, with Chaplain Rev. Father Kenneth Mulholland and Battalion Chief Emmet Byrne of the Bureau of Fire Education. Chief Cain had just asked the group if anyone would care to back out after seeing their first major fire and the answer was a unanimous "No!"

dows could not be battered in by high pressure streams but finally, when the heat of the buring interior increased, the cold water streams from the exterior finally cracked them open.

Three firemen were injured, none seriously. A concrete loading dock across the street from the burning plant, under which 5,000 gallons of gasoline were stored, was kept wet down. At 3:10 P.M. the fire was under control but firemen remained at the scene for some time to guard against rekindles. The rookies returned to their lessons.

Box Factory Blaze Imperils 200

A roaring fire that raced through the huge mill of the W. H. Champlin Box Company, Glenwood Ave., Rochester, N. H., Sept. 21, 1949, nearly trapped 200 employees who, warned as flames burst through the door of the main mill, fled, many leaving behind their belongings.

The fire quickly razed the four-story main wooden building, destroying valuable machinery and lumber, despite efforts of Rochester and outside firemen, who used bulldozers to push back burning piles of lumber to keep flames away from the huge company sheds filled with lumber.

The big plant, one of Rochester's main industries, is located on Route 16 main traffic artery to the White Mountains, and the Boston & Maine R. R. on the edge of the city.

The fire, origin of which is unknown, is said to have started in the basement under the main mill and to have smoldered for some time before breaking through the floor into the main building. Workmen, who smelled smoke, first saw the flames coming through the floor. The foreman called for the mill to be shut down, and while employees attempted this there was a puff and the room was quickly enveloped in flames. All operators managed to escape.

When Fire Chief Ralph G. Seavey and firemen arrived in response to an alarm from Box 28, Glenwood Ave., and Wakefield St., flames were roaring through the structure, threatening the millions of feet of dried lumber, and homes in the vicinity.

Chief Seavey quickly called for aid and Chief Edward Knott of Dover sent Engine 2 and men. From Somersworth came Chief Edward Caron, Deputy Chief Albert Lessard and two trucks. Portsmouth sent men and equipment to cover-in at Rochester fire headquarters and equipment and personnel were rushed from East Rochester and Gonic in charge of Deputy Chiefs William B. Shaw and John M. Meader.

Several carloads of lumber on a side track caught fire and were destroyed. The fire communicateed to stacks of stored lumber, and employes, braving the heat, used tractors to pull much stock to safety. At one time the heat necessitated shutting windows of the Spaulding High School some distance away. The column of smoke from the blaze was visible in Portsmouth, 23 miles distance.

From the mill the fire communicated to piles of lumber, then to one of the large sheds housing the more valuable stock, which was partly consumed. Fire fighters, however, stopped the extension of the blaze at this point.

Rain, which started about 8:00 P.M., was insufficient in quantity to aid the weary firemen, who, with factory workers, made stands in areas where bulldozers and trucks had been used to clear away lumber before the on-coming fire.

The same mill was saved by firemen, after a hard battle in October, 1947, when the disastrous forest fires swept the area, burning 40 homes in one day.

All men in the Police Department were called to control the heavy traffic and the crowd of spectators attracted to the scene. State troopers and County Sheriffs aided. Red Cross units went into action, as did the mobile unit of the Salvation Army.

The loss was unofficially set at $500,000.

San Mateo County's New Forest Fire Truck

San Mateo County Has Unusual Forest Truck

To help combat increasing fire hazards attendant upon the growth of San Mateo County, a new tanker truck has been added to the five other fire fighting units located at the Main Station, in Redwood City.

The county measures 38 miles north to south, and 1 to 20 miles in width, with elevation from sea level to 2,300 feet.

The new tanker has a 160 H.P. motor and is equipped with air brakes and 15" Hydrotarder (water brake) on the drive shaft, which permits negotiating grades without shifting gears or apply air brakes. A station stand-by truck air system with automatic disconnect valves provides constant air for its air brakes. Other specifications include: 1,000 gal. baffled steel tank, with removable top (11" porthole for filling); tank, skid pump unit and cab are spring loaded and pipe connections are flexible. Skid mount pump, between cab and tank, has Hale 2-stage 350 GPM pump, front mount type, with a 90 GPM Hale High Pressure pump on flywheel end. The Hale 350 discharges into the Hale H.P. pump in order to reduce motor R.P.M.'s. Front and back 3" suction from tank to L.P. pump. The skid unit is vented with louvres.

Both power plants have 12 v. batteries so connected as to be able to start either unit. Skid unit can be operated from the driver's seat and both sides of the rig. Electric heaters protect motors against drop in station temperature. Emergency lighting includes spot light (white); full-range red spot on side, and rotary, red light on top of cab; air horn and pickup lights are provided. Marine masthead blinker lights are mounted on rear cross-rail posts.

Two electrically operated hose reels are mounted on tanker, one on each side of the spare tire. Each contains 150 ft. of ¾-in. H.P. hose. Body on top of tank is divided into 5 troughs: No. 1 contains 750 ft. of 2½-in. S.J. hose; No. 2 holds two 150 ft. lengths of S.J. hose connected as live lines to a valved 1½-in. Siamese, located on rear of truck body. No. 3 contains 1,500 ft. of 1½-in. S.J. hose; No. 4 holds 1,000 ft. 1-in. S.J. hose, and No. 5 has four 10 ft. lengths of 2½-in. hard suction hose over which are located a 20-ft. extension and a 10-ft. roof ladders.

The new truck, like all other county fire units, is two-way radio equipped. In addition, military surplus lip microphones are used on the equipment to offset high noise level background when in communication with headquarters.

Another feature includes the use of

Flames Race Through Rochester, N. H., Mill and Lumber Yard
Firemen of five communities fight to control destructive fire that destroyed main building and part of lumber stocks of the W. M. Champlin Box Company with loss of $500,000.

Fire Injures Fourteen Firemen
Smoke billows from three stores in downtown Rochester, N. Y., as a fire caused $100,000 damage. Fourteen firemen were injured, none seriously.

3 in. stripes of red Scotchlite panels, above the running board, across the rear, and on the side of the body, a safety feature when parking along narrow and high speed roads at night.

This truck, according to E. H. Werder, Assistant Fire Warden of the County Forest Service, even though comparatively bulky, is a flexible unit, with low center of gravity; 30-70 load ratio; has good stability and short turning radius, and can be used on many off-the-road operations.

Atlanta Fireman Electrocuted

Fireman Arthur Lee Almand, 43, of Fire Station 8, Atlanta, Ga., Fire Department, was electrocuted when he stepped from an aerial ladder truck while fighting a serious fire which destroyed a furniture storage building at Marietta and Walton Streets, Atlanta on October 26, 1949.

Death struck Fireman Lee down as a result of an unfortunate chain of events, beginning when members of a power company crew, which had hurried to the scene to be of assistance to firemen, started cutting electric power wires so that truckmen could better operate the aerial of Ladder 8.

Two linemen started cutting high tension wires in front of the burning structure. They had cut one end of a cable and were getting ready to cut the other when the accident happened. The severed end of the wire was dangling and Armand was on the aerial ladder, which came in contact with the swinging end of the wire. According to linemen, he was all right until he put one foot on the ground while holding to some metal part of the ladder, then he received the shock that killed him.

Although artificial respiration was immediately undertaken, and he was rushed to Grady hospital in the Department's Rescue unit, he could not be revived.

The fire, which started about 4:40 P.M. in the Hudson & Vittur Storage Company Warehouse at 227 Walton St., was caused by the breaking of an electric light bulb, which apparently ignited gasoline fumes from a tank that was being drained. Workmen attempted to extinguish the fire before calling the fire department, so that by the time firemen arrived the blaze had such control of the building that they could not enter to reach the heart of the fire.

Eleven companies, directed by Fire Chief C. C. Styron, fought the fire in the 30 to 40 year old three-story building, built of wood, concrete and brick, using heavy streams directed mainly from the exterior. The heavy volume of smoke was attributed to burning rugs in storage in the building. Fire fighters were still on duty at the scene the next morning.

The loss was estimated at $200,000.

20 Casualties in Stubborn Rochester Fire

Twenty firemen suffered minor cuts or smoke poisoning while fighting a two-hour, two-alarm fire that caused $50,000 loss to a three-story brick building at the corner of Main St. E. and Scio St., Rochester, recently.

The first floor of the building has been occupied by Strauss Stores. The upper floors were vacant. Origin of the fire is undetermined but it apparently started in the upper part of the structure and quickly found its way into the blind attic, giving off heavy volumes of smoke.

The first alarm was received from Box 14 at 1:12 P.M., and soon after arriving at the scene, Battalion Chief Clarence Norman sent in a second alarm from the same box. In addition to bringing additional pumpers and ladder companies, this brought Fire Chief John A. Slattery.

Firemen experienced considerable difficulty in getting at the stubborn fire in the concealed spaces of the upper part of the structure. Most of the fire fighting had to be done from the exterior and, although the fire was held to the upper section, water damage on the lower floors was considerable.

At 2:10 P.M., Chief Slattery ordered all firemen off the roof and out of the third floor, as collapse was threatened. It was nearly 4:00 P.M. before fire fighters were able to work without annoyance from the choking smoke. One fireman, Lieut. Nelson Kolb of Engine 9, was hospitalized for smoke narcosis. Dozens of firemen kept two ambulance crews busy administering oxygen.

Directing the fire forces with Chief Slattery and Battalion Chief Norman were Acting Deputy Chief Walter Adams and Battalion Chief Daniel McMahon.

Volunteers Protect Suburban Rockford

On Sunday, October 9, the West suburban Volunteer Fire Department, Rockford, Illinois, was officially placed in operation. A three-horse-power siren atop the department's new station at 3816 West State Street was sounded to

Smoke Billows from Burning Four-Story Building Which Was Gutted by Fire at Atlanta, Ga., October 26. One Fireman Was Electrocuted and Another Was Overcome Temporarily by Smoke.

New Fire Truck of West Suburban Fire Department

mark the climax of many years of promotion by civic-minded residents of the large suburban area just west of the Rockford city limits.

More than a year was spent by community workers in preparation for the new services. The district, with an estimated 6,000 population, voted overwhelmingly on June 26, 1948, to establish the West Suburban Fire Protection district.

The department's new Boyer-White pumper was delivered on Oct. 6. A used truck in good condition had been purchased previously and fitted with a 1,100 gallon water tank.

The new station, constructed of concrete blocks, is complete except for interior finishing and is large enough for an office, kitchen, recreation hall and both trucks. Wall maps of the area have been placed in the station, and office equipment has been installed.

Telephone connections with the Rockford fire alarm office have been made. To report a fire, residents of the area dial 4-3321, the regular number used in Rockford to call firemen.

A key is thereupon pushed in the alarm office in downtown Rockford and the siren switched on. The siren continues in operation automatically in two-minute cycles until turned off. There will be no firemen on duty in the new station, but volunteers will go to the station immediately upon hearing the siren.

Each volunteer firemen carries a key to unlock the station. The first man in answers the telephone and is given the fire location by the Rockford alarm operator. The man who gets the information writes it on a large blackboard for other volunteers to see.

Both the new pumper and the new tanker will answer all alarms. Water will be first drawn from the tanker, and then if more water is needed, from the pumper's own 500-gallon tank while the tanker is refilled at a hydrant.

The new pumper is a 500 G.P.M. triple combination and is equipped with a 500 G.P.M. multi-stage centrifugal pump, 500-gallon booster tank, 1200 ft. hose bed, and all necessary minor equipment. This was delivered from the factory by Harry T. Armington, General Manager of Boyer company, and D. W. Stevens, the distributor for the territory.

Harry Ritter is the Fire Chief and his assistant is Barney Lutz.

Winnebago county now has 12 fire protection districts in adidtion to Rockford. They are Rock River, Loves Park, New Milford, North Park, Harlem-Roscoe, Log Cabin and Cherry Valley,Pecatonica, Rockton, Win-Bur-Sew, Durand, South Beloit and West Suburban.

Eighteen Children Escape Lockport Fire

What might have resulted in another fire tragedy was narrowly averted on November 13, when a blaze, started by the explosion of a blow torch being used by Police Justice J. P. Degnan in his second floor office at 29 Main Street, Lockport, N. Y., spread rapidly to two adjoining buildings. Eighteen children attending a dancing class on the third floor, over the Justice's office, barely escaped before the narrow exit stairway was enveloped by flames.

The fire swept to the third floor, and roof area of the 3-story brick building at 29 Main St., spreading thence to the loft of buildings at 27 and 25 Main. It was started when the Police Justice attempted to remove a nut on one of his office chairs with a blow torch while his wife looked on.

When he set the torch down, it exploded. The Justice carried his daughter and led his wife from the scene uninjured, then he returned to help remove the children in the dancing class.

Police and volunteers removed an 87-year-old woman and other occupants of the adjoining structures, as fire threatened them. Firemen, however, responding on several alarms, were able to control the blaze. Losses were estimated by Fire Chief Daniel N. Haley at more than $200,000.

A Fluorescent Light Fire

A fire that involved a fluorescent light installation described in the U. S. Navy Civil Engineer Corps Bulletin (November, 1949) prompts the CEC to say "Watch Your Fluorescent Light Installations."

The fire occurred on the fifth story of a manufacturing building which had just been remodelled and air conditioned, and recessed light fixtures of the hot cathode type had been installed between joists in a suspended ceiling.

The defect in this installation was caused by laying batts of fiberglas insulation loosely across the tops of the joists, resting directly on the lighting fixtures. This permitted contact of the asphalt-impregnated paper which covered the batts with the fixture and concealed spaces were formed between the joists where the fire could burn and spread out of reach of the sprinklers.

An electrical breakdown of a ballast unit on top of one of the fixtures caused overheating, which ignited the paper. Flames spread to the joists and heat progressively opened 77 sprinklers under the roof overhead, but the fire was out of reach. Firemen removed sections of ceiling and used six small hose streams in an effort to kill the fire but flames kept breaking out. In half an hour the fire subsided, and sprinklers were shut off. Flames then broke out vigorously, and sprinklers had to be turned on again. Firemen finally had to cut through the roof to get at the hidden fire.

In reconstructing the ceiling, after the fire, the insulation was packed between the joists to avoid hollow spaces, the paper covering was removed where it would be exposed or in contact with fixtures and no insulation was placed on top of the fixtures.

Eighteen Youngsters, Dancing School Pupils, Were Led to Safety from the Third Floor of This Blazing Business Block in Downtown Lockport, N. Y. An exploding Blowtorch Was Blamed by Police for the Blaze.

Short Cuts and Gadgets

TO SAVE CONFUSION IN SUCTION HOOKUP

Now and then you come across a fire department that has difficulty in booking up suction sleeves for drafting—particularly when more than a single section of the hard suction is needed. In the dark, or because of shortage of men and having to depend upon willing—perhaps too-willing, but untrained civilian volunteers, precious seconds are sometimes lost in connecting up the fittings.

Now comes a "short cut" that tells how one volunteer department helped solve the problem. It is from Bob LaGrange, a member of the Vinton, Iowa, Volunteer Fire Department. He writes:

"I don't know if this particular short cut has ever appeared in your magazine before, but the Vinton Volunteer Fire Department, of which I am a member, has used it for some time now with very good results.

We found that, in drafting water, we were losing too much time in suction hook-up. In a small volunteer fire department such as ours, it is impossible to have men who are specialists in every field of fire fighting, therefore some of our men were at a loss when it came to hook-ups.

What we did was to paint the couplings of our suction sections: the coupling which fits the intake side of the pumper was colored red, to correspond with the truck colors. And we painted the coupling on the opposite end yellow. We then painted the female end of the second section yellow, and the male end green. The third section female end was painted green and the other end (male) was left in its natural chrome.

Thus, at a fire it is a very simple matter to hook-up. You simply match the colors, attach the strainer, and you are ready to draft.

* * *

MORE ON IDENTIFYING EXTINGUISHERS

Previously we have published several "Short Cuts" for facilitating the selection of portable fire extinguishers for particular types of fires. Most of these were based on some sort of "mounting board" or panel.

Sherwin Day of New York City, has an idea for using color to help identify extinguishers, according to types of fires for which they are intended. The short cut applies particularly to industrial and other installations where more than one kind of fire may be encountered—and more than one type of extinguisher wanted—in a hurry. But let him tell it. He writes:

"I have read with interest in your excellent magazine about several panel boards which describe the uses and operation of the various types of fire extinguishers. No provision seems to have been made, however, for the extinguisher which must be spotted singly about the plant, near to each hazard. With no panel board to distinguish them, some units look alike.

My idea would be to designate a color for each class of fire. The wall directly behind each individual extinguisher would be painted a color or colors to correspond with the class fire for which it would be suited. A "color chart" explaining what each of the three colors means, would be posted at many points throughout the factory (or other occupancy). This "color chart" could be incorporated into the panel board. Once an employee had learned what the colors mean he could not possibly go wrong in an emergency. Constantly emphasize the difference in equipment and serve to make the equipment stand out and be easily noticed (and identified)! So far as I know, this scheme has never been used."

For Brother Day's benefit, the idea has been used. However, it is still a common practice to identify extinguishers hung on posts (where *any* color is used) with the same color, regardless of types of devices, and their use. This idea may stimulate industrial and municipal fire officers to further efforts along this line.

NEW TYPE AIRCRAFT FIRE NOZZLE

The Public Information Service, Caribbean Air Command informs FIRE ENGINEERING about a new type of fire hose nozzle which it has developed, and, which enables firemen to gain access to hitherto inaccessible areas inside aircraft. The nozzle consists of small gauge extended pipe with a sharply pointed nose, designed to pierce cowlings, wings, fuselages and engine nacelles, leaving only a small, easily repairable hole in the metal.

While it will not replace any current equipment being used, the announcement says, the device has proven a valuable asset in four phases of fire fighting: for aircraft engine fires occurring in grounded planes; for fires in VH bombers, when the engine nacelles are difficult to reach with standard equipment; for use on fires occurring in flight, in areas of the plane ordinarily inaccessible; and against conflagrations between "stovepipe" and the fuselage of jet aircraft.

The nozzle has also proven valuable in crash rescue, since the fuselage can be pierced and the area around injured personnel can be sprayed and the fire retarded until those within can be reached.

Those responsible for the innovation are said to be S/Sgt. Emanuel Bromberg, former non-commissioned officer in charge of the School and now assigned in the U. S.; S/Sgt. John F. Patledge, current N.C.O. in charge, and Sgt. William D. Carey, a veteran crash rescue N.C.O., who was once assigned during World War II to the 91st Bomb Group, in England. The designs of the device have been forwarded to Wright-Patterson Air Force Base, Dayton, Ohio, for further evaluation and development.

* * *

The Old Timer Says—

"Sometimes I wonder if we don't overdo this business of pitchin' things outa buildings when we're overhaulin'. I can see where it's good practice to remove *some* things to the outer air that may be have gotta be "disemboweled"—or specially soaked in order to prevent rekindle, but even here, if this new wet water is used, a lot of that labor is ended! Of course it's good to do a nice clean job of overhaulin', but I wonder if sometimes we don't "rob Peter to pay Paul," by makin' an unholy muss *outside* th' house or store—where *everybody* can see it and think—*"those house wreckin' firemen!"*—when we *think* we're cleanin' up *inside*—where only a *few* folks may see the damage!"

Staff Sergeant John F. Rutledge, Non-Commissioned Officer in Charge of the Caribbean Air Command's Fire and Crash Rescue School, and Co-Inventor of the New Type of Fire Hose Nozzle, Demonstrates the Ease with Which Ordinarily Inaccessible Fires Can Be Reached with the Nozzle, by Merely Punching It Through the Fuselage Metal of a Plane

The WATCH DESK

Overhauling the firemanic news of the day

by ROI B. WOOLLEY

It's in the Bag, Says Mother!

From James Barron of the Delta Fire Company, Delta, Ohio, comes a story about how a Delta woman used her noodle—and various and sundry fire fighting experiences—to overcome a fire in her home.

A couple of years ago, writes Contrib Barron, in freezing weather a fire was discovered in a Delta home. The fire was in a partition of an inside wall where a stove pipe went through the wall and into a chimney. The time was about 7:00 A.M.

First the mother of the family occupying the dwelling called her two sons out of bed. She dispatched one son for a pail of water which, when she got it, she used in an effort to get water on the fire, a dipperful at a time.

The other son was sent for the garden hose but this was found to be frozen, having been hung up with water in it where the cold weather could get at it.

Unable to lick the fire with the dipper technique, the mother as a last expedient, brought out her rubber hot water bottle, with its three foot length of small tubing and "nozzle." This she filled with water. Then she screwed in the stopper with "hose" attached. She put the "bottle" under her arm, stuck the "hose and nozzle" into the partition, and then gave her arm a big squeeze.

Talk about your high pressure streams. The fire went out and the mother went about her duties. Incidentally, she put into practice a principle of fire extinguishment developed by the early Romans.—(Thanks, W. A. McDONNELL)

* * *

Vet' Truck Ends Up in a Blaze of Glory?

The little town of Montgomery, N. Y., is scheduled to receive a new fire truck in the near future—and according to the vamps, it can't happen too soon for them!

Montgomery's fire chief—our deponent giveth not his name—was en route to Elmira on Route 17 on the morning of October 19th last, with the old veteran vehicle that was to be used as a trade-in on the new job.

Just west of Waverly, N. Y., across from the Iron Kettle Inn, at about 10:30 A.M., the engine caught fire and for a few minutes it looked as though the ancient and honorable unit was gonna go up in a blaze of glory.

Waverly firemen were hurriedly summoned and came on the jump. A few gallons of water from their rig's booster truck quickly quenched the budding blaze in the Old Timer. After a bit of overhauling, the Chief and the Museum Piece were able to continue on their way. CHARLES HOUGHTALING.

* * *

The Late Ripley Would Have Listed This

From J. Guy Rusmiselle, Chief of the Waynesboro, Va., Fire Department comes this communique: "I noticed in the pamphlet 'Facts About Fire' that in 1444 in the City of London, the firemen put out a fire with vinegar. So I decided to tell you of my experience fighting fire with vinegar—or near vinegar, because in this case most of the extinguishing agent was cider, it not having reached the vinegar stage.

"The call came in around 11:00 P.M., from a plant outside the city that did not have fire protection. As we rolled we could see from the light in the sky that the plant was probably doomed and when we arrived we found there were some 30 large tanks holding 80,000 gals. of vinegar, located close to the fire, about ready to ignite. Actually, one tank was afire when we pulled up.

"I told the manager there was no chance of saving the building but we could save the tanks with the contents if he would let me fight the fire with vinegar, there being no appreciable water supply available. This he agreed to do.

"We got a large barrel and put our suction in it and opened one of the large tanks to discharge into the barrel. To make a long story short, we saved the exposed vinegar storage, which ran into a large sum of money."

* * *

Hot Off the Tape

Santa Claus and Fire Commissioner Frank J. Quayle gave the New York Fire Department a nice holiday present when the Municipal Civil Service Commission certified 129 eligibles on various civil service lists to positions on the Fire Department. Actually the action affects only 56 appointments and 29 promotions, as of January 1, 1950. Captains Edward J. Gorham and Charles B. Williams are promoted to Battalion Chief; five lieutenants are advanced to captain and 19 firemen to lieutenants. Three firemen are raised to marine engineers and 56 new firemen were "made" as the year dawned. Captain William P. Walsh, Sr., has been certified for later promotion to battalion chief. . . . In Canosia Twp., near Duluth, Minn., men fight the fires, and the women raise the money. Fifty women have formed an auxiliary to the local volunteer department to raise funds for fire fighting equipment. They call themselves "The Fire Bells." Some sirens! . . . In Philadelphia, which has been getting very fire conscious of late, Fire Marshal George H. Kingston slapped summonses on 58 owners of 88 apartment buildings and tenants for fire safety violations. . . . Mrs. Mildred Noble, wife of a well-known Dallas, Tex., gambler, was killed in Dallas when she attempted to start a parked car in front of the Noble home and the car was wrecked in a shattering blast. Her body was hurled 100 feet away. Dynamite and nitroglycerine were used to make the home-made bomb which was wired to the starter. . . . John Brown's cabin, near Topeka, Kans., was burned December 1. Century-old log structure, used as a hideout by Abolitionists during the Civil War, was ignited when a grass fire spread to a garage and embers were blown to the cabin. . . . New York City fire fighters carried an ailing 300-lb. woman to safety in a basket, December 1 after she was found unconscious in a smoldering bed in a fourth-floor apartment on W. 53rd St., Manhattan. A $50,000 barn fire destroyed 51 farm animals, harvested grain and farm machinery near Portland, Mich., December 11. . . . After turning in an alarm of fire which destroyed an $18,000 barn at Price's Switch, N. J., John Decker was stricken with heart attack. Fifty head of cattle were rescued and Vernon, N. J., firemen saved farm house and other property. . . . Philip Burrows, aged 2, of Los Angeles, knows now that a toilet seat doesn't make a good collar. He got his head stuck in a seat last month and, when mother couldn't pull it off, she called a doctor, who tried grease. When that didn't work, firemen were summoned, and they freed Philip with a saw. . . . Volunteer Fireman Edward C. Skimmons, 38, of Hamilton Twp., N. J., collapsed and died December 17 of a heart attack when fighting a fire in a storage shed. . . . In Springfield, Mass., a survivor of Boston's Cocoanut Grove holocaust was so scared on December 11 that firemen had to forcibly carry him from a burning building where three fire fighters were injured controlling the fire. . . . New York Fire Department Fire Marshal's Office is investigating a series of suspicious fires in the psychiatric building of Bellevue Hospital, Manhattan. Three fires in one week, in one of which two separate blazes in mattresses were discovered, had patients and firemen a bit nervous for a time.

* * *

Business Bothers Bergenfield Braves

Sunday, November 13, 1949, will be remembered for a long time by the vamps of Bergenfield, N. J. The day left 'em in a dither, a tizzy and a pother, not to say swivet!

It began at 8:31 A.M., with a minor blaze in an apartment. At 9:39 A.M. the whistle sounded for a serious fire in a downtown supermarket which injured one fireman. While that blaze was being fought, Dumont, N. J., firemen had to be called in to fight a fire caused by an overturned oil stove.

Two firemen were injured in this espisode. But the Bergenfield ambulance was already out on a call, so the Dumont ambulance had to be summoned. And just to top the day off, one of the fire trucks hit a parked car, en route home from the supermarket fire! Bingo!

* * *

This Squirrel Story Is the "Nuts"

A squirrel interrupted electric power in three cities, set fire to a pole and asphalt pavement on Mountain Street, Derby, Conn., on Nov. 10, and charged a pumper of the Storm Engine Company with electricity so that a fireman had to don rubber boots and rubber gloves to shut the water gates on the fire apparatus.

Sections of Derby, Ansonia and Shelton were without electricity for some time after the squirrel short-circuited a power line on B Street, between Park and Hawthorne Avenues, Derby, burning out a condenser on a 6,000 volt line on Mountain Street, a mile away, setting fire to the pole to which the condenser was attached and igniting the street pavement.

Firemen covered the burning asphalt with sand until linemen arrived from the Derby Gas and Electric Company and then extinguished the flaming pole with chemicals.

The squirrel—oh, he or she was burned to a crisp. (Thanks TOM MAGNER)

News of the Manufacturers

Battery Charger for Mounting on Apparatus

A new and compact battery charger, designed for permanent installation on fire apparatus, has been announced by the J. H. Electronic Sales Company, Box 6844, Towson 4, Md. The new unit is compact, requiring a space of but 10 x 8 x 7 inches; it weighs 15 pounds.

New Battery Charger for Mounting on Apparatus

The case is made of cold rolled steel with spot-welded seams and finished in baked enamel.

The charger is available in 6 and 12-volt models, both capable of servicing batteries in single or dual systems. A manual changeover switch makes it easy to charge all batteries on single or dual systems.

Automatic pilot lights show circuits in operation. A manually operated switch gives eleven steps for different charge rates up to 10 amperes, and compensation for variation in power line voltage. A conveniently placed meter continually indicates rate of charge.

The unit has a thermo type overcurrent circuit breaker which disconnects the charger if an overload occurs. This breaker is of the automatic resetting type. A special relay automatically disconnects the charger from the battery when the unit is not in use.

The unit is free of all radio interference and objectionable "beam."

Fire Pumps

Two basic types of Underwriters' approved centrifugal fire pumps, together with selection charts, necessary fittings and application data are described and illustrated in a new Bulletin available from the Peerless Pump Division of the Food Machinery and Chemical Corporation.

Both single-stage and two-stage fire pumps and their methods of drive and application are comprehensively covered, both in illustration and text in this Bulletin. In addition, dimension drawings and dimensional data are set forth on both types of pumps. Selection charts cover capacity, heads, horsepower range, rpm of each pump for each type of drive, which can be electric motor, diesel, gasoline engine or steam turbine.

Four of the Bulletin's pages are used to describe necesssary fittings for all approved fire pump installations, with detailed text on hose valve heads, blind flanges, overflow cones, eccentric suction reducers, concentric discharge increasers, relief valves, etc. Tank filling and jockey pumps for use in connection with automatic sprinkling systems are also described and illustrated.

The Bulletin shows installation of the various types of pumps and drivers. One of these installations is an unusual foam system employed by the Hercules Powder Company for protection against fire in solvent process buildings in its naval stores plant at Brunswick, Georgia.

Copies of this Bulletin, designated as Bulletin B-1500 may be obtained by writing the manufacturer, Peerless Pump Division, Food Machinery and Chemical Corporation, 301 West Avenue 26, Los Angeles 31, California.

New Darley Catalog

W. S. Darley & Co., of Chicago 12, Ill., has just issued Catalog No. 143, of 96 pages and cover. This new catalog is profusely illustrated and lists and describes a full line of fire fighting apparatus and equipment. It is the most comprehensive and complete catalog ever issued by Darley.

Howard-Cooper to Represent Kenworth

Howard-Cooper Corporation has been selected to represent the Kenworth Motor Truck Corporation for fire truck sales and service in Washington, Oregon, Idaho, Montana and Alaska, according to a joint announcement made recently by Vernon A. Smith, vice-president in charge of sales for Kenworth,

Vernon A. Smith

and W. A. Wylie, executive vice president of Howard-Cooper.

With headquarters at Portland, Howard-Cooper Corporation also has branches at Seattle (where a new plant will soon be opened), Albany, Eugene, Central Point and Roseburg.

The Kenworth plant, located in Seattle, has been the source of many of the heavy duty fire trucks used on the Pacific Coast during the last third of a century.

In the field of fire apparatus, Howard-Cooper now builds all types of rural and city pumping engines, ranging in capacity from 150 g.p.m. to 1500 g.p.m. In the larger units, those having capacity of 750 gallons per minute or more, this equipment is offered in connection with Kenworth fire trucks.

Principal officials of Howard-Cooper Corporation, all of whom make their headquarters in Portland, are Frank R. Cooper, president and son of one of the original founders; W. A. Wylie, executive vice president; Frank Parker, general sales manager and Miss Edith C. Lundquist, secretary-treasurer.

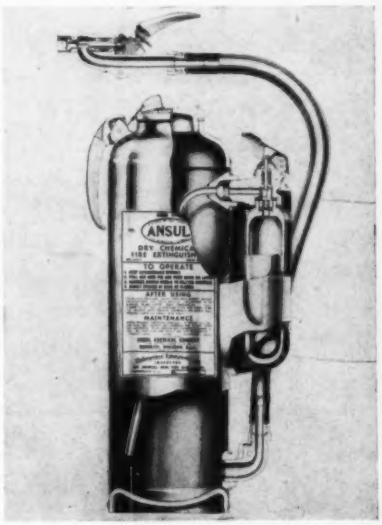
Embree Joins Eureka

J. (Jim) A. Embree, former Chief of the Hope, Ark., Fire Department, recently joined the Eureka Fire Hose Division of the United States Rubber Company and will operate out of the Alexandria, La., office of that organization, under Fred L. Davis, Manager of the Branch.

Mr. Embree's sales activities will be confined largely to the State of Arkansas.

Water-Tight Construction in New Ansul Extinguisher

An improved model dry chemical fire extinguisher, said to be completely water-tight, has just been introduced by Ansul Chemical Company, Marinette, Wis.



New Ansul Extinguisher

The company reports the improved unit, the Ansul Model B extinguisher, is more rugged, more dependable and easier to maintain than its predecessor, the Ansul Model A extinguisher.

Ansul's 10 years' experience in the dry chemical field has led to the incorporation of 12 new design features. Chief among these are the nozzle and cartridge receiver. Specially designed seals inside the nozzle and receiver have made these two vital parts water-tight.

Other important changes in the Model B extinguisher are new threaded hose connections, new cartridge guard finger grip and redesigned carrying handle. Performance has been improved by these engineering advancements and maintenance and recharging have been simplified.

The Ansul Model B extinguisher is available in 20 and 30 lb. sizes.

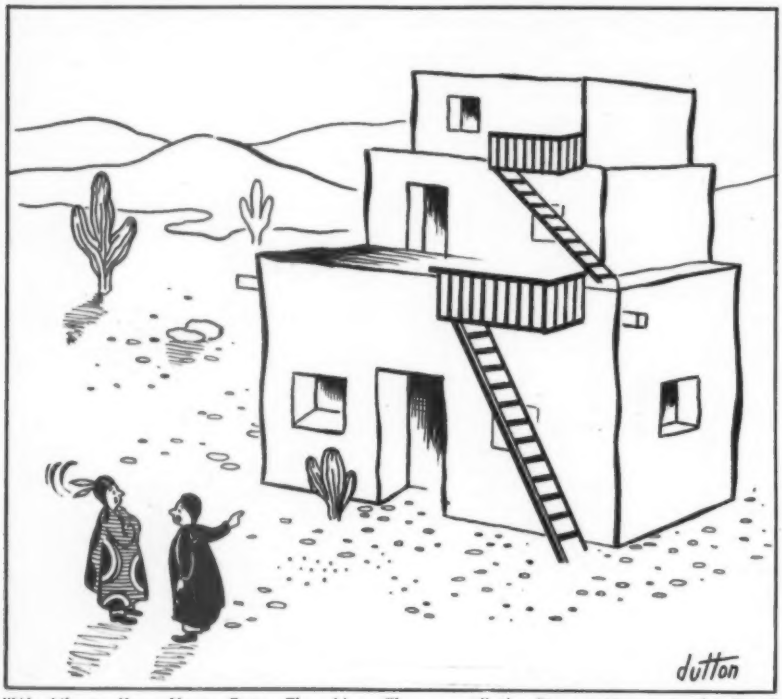
Along with this model, Ansul also announces a price reduction on its fire extinguishing equipment. Freight allowances are being granted on shipments of 200 lb. or more.

New Carbon Dioxide Fire Extinguisher

Deviating from its standard 4 and 5 pound sizes, Randolph Laboratories, Inc., Chicago, Illinois, has produced a

(*Continued on page* 65)

FALSE ALARMS



"We Like to Keep Up to Date. They Have Them on All the Biggest Houses in the City."

A comely colored girl had just been baptized in the river. As she came to the surface, she cried, "Bless de Lawd, I'se saved! Last night I was in de arms of Satan, but tonight I'm in the arms of the Lawd!"

"Sistuh," came a baritone voice from the shore, "how is you fixed up for tomorrow ebening?"

The Horse That Made Good

There was once an old cavalry horse which had given good service and was finally retired on a pension. Having nothing to do with his time the horse went to Harvard University. Came graduation day and the horse walked up to the platform to receive his diploma. On handing him the diploma the president paused to remark: "I want to congratulate you. In the entire history of this school you are the first WHOLE horse Harvard ever graduated."

A pullet becomes a hen when it loses its first race.

"I didn't know she was a golfer when she asked me to play around."

A Kentucky Colonel always closed his eyes when he took a drink. When questioned concerning his habit, he explained.

"The sight of good likah, suh," he said, "always makes my mouth watah, suh, an' I do not like to dilute my drink, suh."

A Bore is one who insists upon talking about himself when you want to talk about yourself.

"Ed Looks as If He Just Lost His Bankroll at the Races!"

Slight Error

Druggist (emerging from the back of his store with a glass of lemonade in his hand): "It's so hot today, won't you take this glass of lemonade while you are waiting?"

Bill G.: "Thanks. (After drinking the lemonade): How much longer will it take to get the castor oil?"

Druggist: "I fooled you that time. You have already taken your castor oil with the lemonade."

Bill G. (gasping): "Ow! The castor oil was supposed to be for my kids."

Asked why he was going to marry a glamour girl from the city instead of some woman his own age, Grandpappy opined: "I'd a heap ruther smell perfume than liniment!"

Cutting It Short

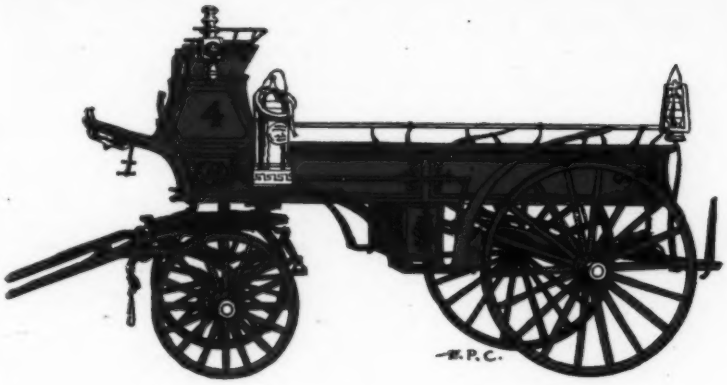
This story won first prize in a competition run by an American periodical for stories of brevity and dramatic content:

Elvina Parker received a telegram from her brother, who was accompanying her husband on a big-game expedition in Africa. The telegram read: "Bob killed lion hunting—Fred."

Elvina, overcome with grief, wired back: "Send him home.—Elvina."

Three weeks later a large packing case arrived from Africa. Inside was a lion. Elvina sent a telegram: "Lion received. Must be mistake. Send Bob.—Elvina."

Back from Africa came the reply: "No mistake; Bob in lion.—Fred."



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World Wide Fire News

By Roi B. Woolley

Church of Holy Sepulcher Burns 28 Hours

The dome of the Church of the Holy Sepulchre on Mt. Calvary, one of Christendom's most hallowed shrines and directly over the tomb of Christ, together with most of the roof of the ancient structure, were destroyed in a fire which began at 5:00 P.M. on Nov. 23 and was not extinguished for 28 hours.

Starting when a workman, supplied by King Abdullah, ignited a wooden portion of the roof beneath the lead covering, flames ate their way through the composite wool mesh between the lead roof and the pine beams within and were only stopped from further penetration by another layer of stone masonry, backed by reinforced concrete. The interior of the edifice was reported little damaged and all the sacred vessels were removed during the night by priests and monks.

All the fire fighting equipment in Hashemite Jordan and Arab Palestine were rushed to the Old City, in which the church stands by order of King Abdullah. As bells of other churches sounded alarms, fire apparatus, such as it is, were sent to the scene but difficulties in combating the blaze were magnified by the narrow cobblestoned approaches to the church and lack of water. The fire, which was said to have had a three hour start, shot out of a hole in the roof that had been caused by mortar damage during the war. This was about 8:00 P.M. It continued to burn and, at 6:00 P.M. on the 25th, was blazing savagely in the face of almost futile efforts to control it.

The dome, or cupola, was last rebuilt in 1869. The fire is said to have been the first in the structure which stands on the scene of Christ's crucifixion and entombment. A fire in 1808 damaged the edifice. As the fire progressed, sheets of iron were placed above and around the marble tomb of Christ as a precautionary measure. Moslems and Christians flocked to the scene and, after the fire, eagerly sought pieces of melted lead and charred wood as mementos.

No official estimate of the damage was given but unofficial estimate was placed at $850,000.

According to dispatches, King Abdullah was on the scene and spent most of the night of the 23rd "on the telephone directing the fire fighters and sending every available piece of apparatus from Amman, Jordan."

* * *

New Oxygen Mask on the Way?

Press dispatches quoted Aviation Week of November as saying that a constant-flow oxygen mask for airline passengers which will remain effective for four to five hours at altitudes up to 25,000 feet, is being perfected.

The expendable mask, which will cost about 25 cents and can be discarded after use, is an answer to requests by the military air transport service and commercial airlines for a cheap but temporarily efficient, means of supplying oxygen to passengers when planes are forced above their normal flight levels.

The mask was developed by Wright Field's Aero Medical Laboratory, the University of Washington and the H. L. Burns Company of Portland, Ore. The device consists essentially of a porous paper face piece, a bellows made from a .01 inch thick plio-film, and a plastic tubing which connects to the plane's oxygen supply.

* * *

Hot Off the News Ticker

The new St. Anthony's memorial hospital in Effingham, Ill., will be constructed starting early in May, 1950. It will be a 150-bed hospital, adjacent to the site of the demolished medical center, where 75 perished May 5 last. . . . In St. Catherines' Ont., Eddie Caine was credited November 25 with saving a burning school bus filled with children when he stopped his dairy truck and threw quarts of milk on the flames. No one was injured. . . A fire destroyed the business center of Dacca, East Pakistan, November 14, 1949, causing damage in the Chowk bazaar estimated at between $5,600,000 and $14,000,000. More than 900 stores were gutted. . . . Those Americans who wondered what'ell happened to cause the recent coffee inflationary buying may be interested to know that forest fires and a long drought were reported in November to be ruining next year's coffee crop. A witness said there were forest fires everywhere and there had not been any rain for two months. Reports reaching here in December, however, contradicted this statement and claimed next year's crop will be a record breaker. Coffee futures promptly took a nose dive. . . . Maj. Gen. Harry H. Vaughan, the President's much publicized military aide, found himself in a hot spot not long ago when his auto caught fire in Arlington, Va. Smoke came out from behind the dash, followed by flames, and the General called the fire department to douse the fire, and his wife to come get him. Damage, $300. . . . The firemen of Felixstowe, England, were embarrassed no end and their faces got as red as their bally old engine, recently. Seems the 'gine burned up one night when they were fighting a blaze in a nearby village! . . . In Ottawa, Ont., Eugene Moyneur of Malartic, Que., was convicted of theft of fire hydrants, valves and scrap metal worth $800. Culprit was one of four men caught removing hydrants from a machine shop yard. . . . The freighter Eagle, third Panamanian ship to catch fire off the Washington state coast, drifted helplessly as an Army transport and Coast Guard cutter rushed to her aid. . . . Somebody with a misguided sense of humor turned in a "false alarm" of fire that took three Coast Guard cutters, a Cuban cutter, a merchant vessel and an amphibious plane to an area 22 miles off Matanzas, Cuba. Ship was said to be the Norwegian freighter "Kirsten B." and report said it had been abandoned by its crew. . . . As a result of the barracks fire in November that claimed the life of an airman, Edmonton, Alb., Fire Marshal Jack Booth and other fire officials inspected the barracks at the Edmonton R.C.A.F. station. Dwellers in the hut type of accommodation were reminded by the marshal to exert extreme caution in fire prevention in the disposition of rubbish and the upkeep of fire extinguishers. . . . Poughkeepsie, N. Y., firemen worked two hours to extinguish flames that destroyed most of the parcel post and circular mail in a car on a Buffalo-to-New York train on the New York Central tracks. . . . In Blackpool, Eng., Mrs. Esther Annie Frith's nightgown saved her life. She went walking in her sleep

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in her fourth-floor bedroom. Her husband awoke just in time to see her step out of a window. He leaped out of bed, grabbed his wife's nightie and hung on. The fabric held, as she dangled 30 ft. above the street. Her cries and Poppa Frith's yells brought cab drivers, one of whom turned in a fire alarm. Firemen raised a ladder and hauled the sleepwalker back into her room.

* * *

Eleven Killed When Dutch Ship Burns

The 921 gross-ton Dutch SS. Doros, bound for Haitian ports with a general cargo that included nothing of an explosive nature and 358 sacks of Christmas mail it is reported, burned on December 12 last 300 miles off Miami, Fla., following an explosion that shot through the ship.

Eleven were reported dead or missing. Eight survivors, including the cook, who was fatally burned, were picked up by the S.S. Williamsburg and delivered to the Coast Guard.

The explosion occurred about 11:00 A.M. and all hands who could escape took to the lifeboats. What caused the blast has not been revealed.

Fireman Pours Acid on Hose

G. H. Williams, a member of the volunteer fire company at Southport, Conn., was fined $200 and placed on probation for six months by Judge Nicholas J. Phelan in the Town Court at Fairfield on December 12. Williams pleaded guilty to damaging 11 lengths of fire hose in the Southport fire station by pouring acid on the hose.

Fireman Williams was arrested by Fairfield police on October 11, after he voluntarily admitted damaging the hose stored in the firehouse and valued at $900. In imposing the penalty, Judge Phelan said the act was of "a serious nature and might have resulted in serious damage or personal injury if the hose had been used at a fire."

Judge Phelan said he was cognizant of Mr. Williams' good record as a fireman but declared that "in the interests of justice," he could not overlook the matter without inflicting some penalty. Judge Phelan said he had considered imposing a jail sentence but was swayed by the actions of the Southport Volunteer firemen who came to the aid of their colleague and reimbursed him for more than $700 paid to the Town of Fairfield for damage to the equipment.

Damaged Hose at Bridgeport

Philip Reinhart, counsel for Mr. Williams, pleaded for a reduction in the fine. He said the hose damaged was "spare" equipment, very seldom used at a fire. Discovery of the damaged hose was made by Fireman Clifford Waldera, when he attempted to use the hose to wash down the sidewalk in front of the fire station. The acid, it was revealed, was poured down the center of the rolls which were stacked in one pile. The fabric was eaten away near the hose connections.

The Williams case was surrounded by unusual circumstances. Following his confession to damaging the hose, members of his fire company refused to accept his resignation as financial and recording secretary of the organization. The firemen also voted to take $700 from the company's funds and reimburse Williams for that amount which he paid to the town for the damaged hose.

Williams has been a member of the Southport company for more than 25 years. Following his arrest on October 12, Fire Commissioner Michael J. Manat of Southport said, "No man was more active promoting the welfare and interests of the Department and responding to alarms than Mr. Williams.

"His act," he added, "for which there seems to be no clear explanation, came as a shock to all of us. That he meant no personal harm to any of his fellow firemen is shown by his voluntary confession, offered so that other members of the Company would not be clouded with suspicion."

TOM MAGNER.

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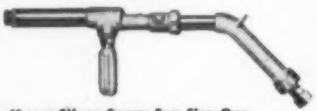

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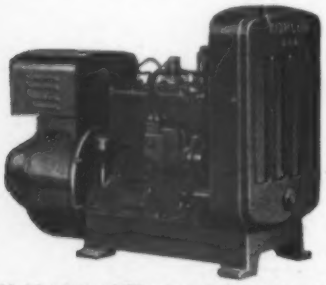

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For Practical Discussion of Current Fire Department and Fire Management Problems

THE WINDOWLESS BUILDING POSES PROBLEMS FOR THE FIRE FIGHTER

THE discussion in this Round Table is a continuation of that which appeared in the December issue on the problem of fighting fires in windowless buildings.

The generous response from our readers made it necessary to carry the discussion over to this issue.

Readers are invited to send in their comments on this subject or on next month's subject which is described in a box on a subsequent page. Address communications to Round Table Editor, FIRE ENGINEERING, 24 West 40th Street, New York 18, N. Y.

Discussion of the Topic

John F. Collins, Chief, Cambridge, Mass.: We do have some buildings which are windowless in Cambridge. These are used for educational and research purposes. Local ordinances provide for the installation of an automatic vent on the roof and an automatic sprinkler system. These buildings are supervised by an ADT detecting system.

Factories have replaced windows with a permanent glass block construction. Our building department orders a window smaller than the original every 100 feet for the ingress and use by the fire department in the event of an emergency or fire.

Paul C. Fontaine, Chief, Fort Worth, Tex.: One such building has been erected within the last few years, and is now occupied by a ladies ready-to-wear shop.

I would recommend that adequate openings be provided for effective fire fighting and rescue; also that fire stops and fire doors be placed throughout the building to keep fire from spreading rapidly.

Our fire prevention ordinance, adopted in 1948, requires a fire escape on all buildings of three or more stories. Two openings were provided on the upper floors of this building for fire fighting purposes.

Walter G. Strickfaden, Chief, Columbus, Ohio: We do have some buildings of the type described in the question in our city.

Local ordinances do not require the provision of openings through which the fire department may operate in the event of a fire.

We would make the following recommendations to prevent loss of life and to prevent the fire getting out of control in such structures.

1. The construction of a special fire tower or stairway of non-combustible material, accessible from each floor, with fire doors to protect that means of egress from smoke and fire.

2. A sprinkler system or some such device would assist materially in the control of fire.

We have not solved this problem. Since this type of construction first began to appear, we have recognized the hazards and the danger involved, and have been greatly concerned. We have consulted with other cities regarding their action, but can find nothing that will offer the solution to the situation we may have to face if a fire should occur in this kind of building.

H. D. Demonbreun, Chief, Nashville, Tenn.: We have a few buildings that have been remodeled and which use glass brick, closing up all windows. I am sure that we will have windowless buildings here soon. We have no local ordinances in regard to this kind of building; however, we have talked about changing our code to cover them.

At present we will use gas masks and fog streams to get to fires of this kind. I would suggest that sprinkling systems be installed to hold the fire

HERE IS THE PROBLEM

During recent years have any buildings been erected in your city which are windowless, or practically so (such as air conditioned and artificially lighted department stores, chain stores, factories, etc.)?

If so, do local ordinances require the provision of openings through which the fire department may operate, particularly on upper floors, in the event of fire?

If no such openings through walls are provided, are other provisions available to permit effective fire fighting and rescue, such as incombustible fire towers in sufficient number?

What recommendations would you make to (1) prevent loss of life, and (2) to prevent fire getting out of control in such structures?

How have you solved the problem?

"all I want is the best"

says Fire Chief Olander Lind of Kansas City, Kansas

CITY OF KANSAS CITY, KANSAS

OFFICE OF
CHIEF OF FIRE DEPARTMENT

OLANDER LIND, CHIEF

CLARK E. TUCKER, MAYOR

November 14th.
1949.

Mr. Robert D. Baird, President
Bi-Lateral Fire Hose Co.
Chicago 6 Ill.

Dear Mr. Baird;

Thanks very much for the copy of the Fire Hose specifications of the City of St. Louis, for I am naturally interested in what other Cities are doing with regard to their purchasing of equipment and supplies.

It is not necessary for me to tell anyone what I think about any equipment that I use on my department, any man on the department will tell you that all I want is the best and if left alone to my own recommendation, that is all we will have.

No person knows better than you that I have used Bi-Lateral fire hose for many many years and in the many thousands of feet of hose purchased from your company we had but one single section go bad on us and that was not the hose itself, it was a cracked or overexpanded coupling. Yes we have several thousand feet of your hose that has been in service more than the ten years as required in the St. Louis specifications, I'll just say this, They wont go wrong on Bi-Lateral. Dont just take my word for it, ask any of the men on my department, they are the ones who use it, and remember Mr. Baird a good Soldier always wants good weapons when he goes into battle.

Sincerely Yours,
Olander Lind
Chief.

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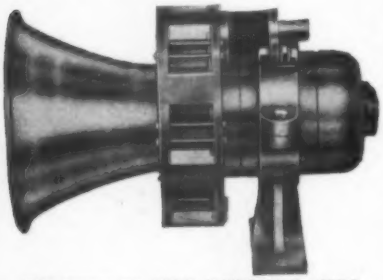

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down until the fire department can get to it with a stream.

H. L. Dey, Chief Engineer, New Orleans, La.: We have no new buildings of this type here in New Orleans. There has been one conversion, namely the International Trade Mart. Several alteration jobs have been done, each story above street level.

The Fire Prevention Ordinance requires exit openings each 25 feet horizontally. However, all openings may be closed provided such building is equipped with approved automatic sprinkler system throughout and provided approved fireproof enclosed exit ways are installed.

To safeguard life, I would recommend the installation of automatic sprinklers, smoke detectors and all other appliances which would also confine the fire.

Howard Travers, Chief Engineer, Baltimore, Md.: A number of stores without windows have been erected. No openings are required by local ordinances. The buildings must be fireproof in construction and equipped throughout with a sprinkler system.

J. A. Mayhew, Chief Engineer, Washington, D. C.: Buildings without windows, or practically so, have been erected here during recent years. Local ordinances do not require the provision of openings through which the fire department can operate in the event of a fire.

The question that must first be considered is whether the community has an adequate building code, particularly as to life safety for windowed buildings. If such a code exists, the additional hazard introduced through the elimination of windows may be offset by access openings to the outside above the first floor, automatic sprinkler systems and other protective devices.

The problem has not been solved but recommendations have been made to the Director of Inspection, D. C., to amend the building code to require such features as the above.

Joseph A. Kirby, Chief, Dayton, Ohio: We have two of the large windowless structures in our city, one a large area manufacturing plant, the other a large area chain mercantile of two stories and basement. Both of the buildings are of fireproof construction and are fully equipped with automatic sprinklers.

Our fire prevention bureau checked the plans before construction and obtained all they could get in the way of protection, not having any specific provisions in our building code.

The industrial has a ventilating and heating system combined that develops a positive pressure in the plant; air intake is through eight fan towers on the roof. This system includes smoke detectors in the exhaust ducts that automatically shut down the fans and open 10-foot diameter smoke vents in the roof. Manual starting of the fans is supposed to exhaust the smoke or gases.

The mercantile has a similar system, capable of developing 3-inch static pressure; manual setting or changing of fan and air adjustments are also necessary. Enclosed stairways leading to the outside are provided. Only street level entrances or exits are provided, other than roof.

I believe that fireproof construction should be a definite requirement, as well as automatic sprinkler protection, under supervision. I also believe that ventilating systems should be made to be reversible even though at a lower efficiency, to provide for the removal of smoke and gases. Numerous cases are on record of rupture and failures of ammonia and other refrigerating gas piping and tanks.

Fireproof enclosures of stair towers should be required, the same to be adequately ventilated, probably automatic in connection with the actuation of the sprinkler system.

Consideration should be given to providing above grade access openings for fire departments, as well as area restrictions for sub-division walls.

The reduced construction costs and the reduced maintenance and heating costs will probably influence the building of many more. However, we should require a higher order of protection for the lives of the occupants.

Alex M. Andrzejewski, Chief, South Bend, Ind.: During recent years we have had a number of such structures erected. Our building code calls for fire towers but no openings for fire department operations.

In each case a thorough inspection is made by our drillmaster and captain responding on first alarm. The building is discussed after the inspection, and plans made in advance for all operations.

We have found these buildings to be of fire resistant construction, so the occupancy becomes the problem. Each of the air conditioning systems are vented through the roof, each floor having its individual vent pipe. We are not too concerned about loss of life, as the building is equipped with a sprinkler system and the employees are instructed in handling the people. Fortunately these buildings are in the high value district and we have plenty of manpower. If the men are instructed in advance and know the location of the various hazards, the problem becomes somewhat minimized.

Elmer M. Cain, Chief, Cleveland, Ohio: In recent years there have been only two buildings constructed in the City of Cleveland that have windowless solid fronts. However, the have adequate openings for fire protection facilities.

In the new building code adopted this year the Building Commissioner and the Chief of the Fire Department can demand access panels on all exterior windowless walls at each floor level from the first to the sixth floor if they feel that adequate openings have not been provided, except in fireproof buildings.

In fireproof buildings vented enclosed stairways with standpipes are required in buildings six stories in height; over six stories smoke proof towers are required in buildings over 75 feet in length.

Provisions of the new code must be complied with when old buildings are remodeled by the provision of access panels and vented towers if windowless walls are installed.

When metal or enamelized metal fronts are used same shall be insulated to prevent transmission of heat in exposure fires.

All air conditioning systems shall be installed in accordance with regulations of the building code of the National Board of Underwriters.

Buildings on interior lots accessible from the front only and over three stories in height and more than 75 feet from exterior openings must be provided with smoke tower or towers as approved by the Building Commissioner & Chief of Fire Department.

To prevent loss of life and excessive fire loss in these types of buildings the Cleveland Fire Department maintains a rigid inspection system whereby companies regularly inspect same in a body—eliminating fire hazards, drilling the personnel of the establishment in fire prevention and acquainting themselves with the construction of the building so that a plan of attack in case of fire can be firmly established to control the fire and prevent loss of life by quick evacuation of personnel.

Henry G. Thomas, Chief, Hartford, Conn.: We have had a few existing buildings modernized by the installation of new windowless fronts.

The following ruling by our local Building Supervisor has the effect of a law:

"By authority given in Chapter 21, Article 1, Section 21-4, paragraph 2 (h), of the Municipal Code of the City of Hartford, I, William J. Ennis, Building Supervisor, do hereby rule as follows with respect to windowless exterior enclosured:

"1. Buildings exceeding two stories in height or in excess of two thousand square feet in area on any floor above the first or ground floor, hereafter erected or altered so that suitable access to each story above the basement or cellar is not provided on one street front, shall be equipped throughout with approved automatic sprinklers. Suitable access shall be deemed as requiring an opening through the front or street wall at each story at horizontal distances not exceeding twenty-five feet, such opening to be not less than thirty-two inches wide, forty-eight inches high and with sill not more than thirty-two inches above the floor; closure of the opening shall be hinged to permit full use of the opening, and shall have glass or equally removable transparent material, with wired glass where required in the Building Code. Buildings not facing on streets and with all enclosure walls windowless or with inaccessible openings shall comply with the above requirement.

"2. Where building alterations are such as to result in the closing of openings on street fronts or other access openings of more than fifty per cent of the present openings of any story other than the ground floor, and the building is not equipped with approved automatic sprinklers, all vertical openings in the building shall be enclosed as required in the Building Code.

"This ruling is deemed necessary to secure the intent and purposes of the Buiilding Code in the erection or alteration of buildings of windowless exterior enclosure design."

The large chain stores by their construction with large windowless basements do present a real problem unless these basement areas are sprinklered.

In the interest of life safety and for the control of fire in such structures, the best fire protection recommendation that I can offer is the installation of an approved automatic sprinkler system.

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Peter Loftus, Chief, New York, N. Y.: Numerous buildings have been constructed in the City of New York in which glass blocks have been used in the construction of exterior walls and interior walls and partitions.

The Building Code of the City of New York provides that glass block construction may be used in exterior wall openings, which openings could otherwise be filled with windows, either isolated or in continuous bands. Glass block construction shall not be deemed an integral part of a wall or partition nor shall it bear any load other than its own weight. The Code further provides that no isolated panel nor portion of continuous band of glass block construction shall exceed twenty feet in height nor twenty-five feet in length without adequate intermediate supports and expansion joints. No such panel nor portion of continuous band shall exceed one hundred and forty-four square feet in area.

Glass block construction may also be used for non-bearing interior partitions which are not required to have a prescribed fire resistive rating, provided that the maximum area of any individual panel does not exceed two hundred and fifty square feet.

These glass blocks may be broken with fire department tools both for the entry of hose and ventilation, and unless the heat of the fire destroys the entire panel, individual units may be replaced. As to damage by hose streams and ventilation requirements, glass block panels compare favorably with hollow metal or steel sash wired-glass windows. However, in the case of rescue work, simply punching through several units of blocks would not prove adequate.

Another feature to be considered is that of diffused light transmission. Glass blocks transmit light in varying amounts dependent upon the type of block used, but it is at most about 12% less transmission than window glass. In the daytime it is difficult to ascertain the location of any interior fire through these blocks. They are translucent but not transparent which makes the distinguishing of light difficult.

Because of the good insulating qualities of these blocks, they are used generally in air-conditioned buildings so as to maintain constant interior temperature without any influence from the exterior. Therefore, in case of fire, the air conditioning equipment must be shut down for otherwise smoke and gases would circulate through the building. Ventilating in this type of building is a real difficulty. It necessitates the use of some device such as a battering ram for ventilating purposes.

As far as life hazard is concerned, the Building Code of the City of New York provides that above the first story or ground floor in every story of a building, fire department access panels shall be provided in every frontage, spaced not more than fifty feet apart on centers horizontally. Each such panel shall consist either of a fixed sash with a single sheet of flat glass at least thirty-two inches wide and forty-eight inches high set in metal frame, or a movable metal sash at least thirty-two inches wide and forty-eight inches high and openable either from exterior or interior. Whenever practicable one such panel in each story shall give access to a stairway, or where there is no stairway at the front exterior wall, one such panel in each story shall provide access as close as practicable to a stairway.

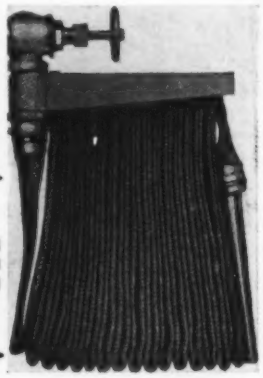
Administrative Code of New York City provides: "No point on any floor shall be more than 125 feet along

HERE IS THE PROBLEM FOR THE NEXT ISSUE

1. **Have you experienced any trouble in recent years with floor furnaces (both gas and oil fired) due to heavy rains, ground seepage or backing up of sewers, flooding pits beneath the units and extinguishing the pilot lights or fires?**
2. **If such troubles have not been encountered, how have they been avoided?**
3. **Have you regulations governing the installation of flame furnaces of the above types which require placement of units above the point where accumulation of water might affect them?**
4. **Who enforces such regulations?**

LOOK HERE →

FOR TROUBLE →



MUCH OF THE HOSE IN RACKS TODAY, THROUGH INATTENTION and NEGLECT, IS UNSAFE FOR SURE PROTECTION

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Look at some of the hose in pin racks! Ever feel that first fold below the valve? Every once in a while you'll find it's just waiting to burst when water pressure is applied.

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line of travel from a stair. Fire tower stairs are required in all business buildings 75 or more feet in height.

My recommendations to prevent loss of life and to prevent fire getting out of control in such structures are:

1. Don't anticipate insurmountable problems.
2. Automatic sprinklers should be provided if occupancy is combustible.
3. Clear aisles to F. P. stairs should be maintained.
4. Attack fire from inside positions (F. P. stairs).
5. Use men equipped with self-contained oxygen masks and battery rams, if necessary, to breach block glass into street from any story for the purpose of ventilation and attack.

Harry F. Johnston, Deputy Chief, Bureau of Fire Prevention and Protection, Milwaukee, Wis.: At the present time there are no buildings in the City of Milwaukee which are entirely windowless. There are a few buildings which do not have windows in basements and on some of the floors.

The City of Milwaukee building code is in the process of revision and a section is being prepared which will require access panels in walls of windowless buildings for fire fighting purposes.

All buildings are required to have sufficient stairways to provide a safe means of egress for occupants.

I would recommend that sprinkler and fire alarm systems be provided in such structures.

In the City of Milwaukee, regulations affecting the requirements for stairways, fire protection equipment, and fire alarm systems come under the jurisdiction of the Building Inspection and Safety Engineering Department.

Chief Active in Michigan Governor's F. P. Conference

Fire service officials took an active part in the Governor's Fire Prevention Conference of the State of Michigan, held in Grand Rapids, in October last.

Fire Chief Frank H. Burns, of Grand Rapids, aided in welcoming the guests to the conference for the fire service. Glenn E. Thom, President, Detroit Fire Fighters Association, Conference General Chairman; John J. Redmond, President and George J. Richardson, Secretary-Treasurer, International Association of Fire Fighters, addressed the session.

Others who spoke were: W. O. Williams, Seattle, Wash.; A. Bruce Bielaski, National Board of Fire Underwriters, New York; Brig. General J. S. Bragdon, Asst. Chief, Army Engineers; Donald S. Leonard, Commissioner of State Police and Fire Marshal, Lansing; Fire Chief Frank Trombley, Sault Ste. Marie, President, Michigan Fire Chiefs Association; Arnold Renner, Deputy State Fire Marshal, Lansing; Loren Farley, Detroit, Secretary-Director, Dry Cleaners' Institute; W. O. Hildebrand, Secretary-Manager, Michigan Association of Insurance Agents, Lansing and Mayor Stanley J. Davis of Grand Rapids.

Conference recommendations called for legislation to create a Fire Safety Commission; increased dissemination of fire prevention publicity, and voluntary fire prevention educational committees for every Michigan community.

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Persons in the News

Chief George Lockhart Retires

The retirement as 1949 closed, of Fire Chief George S. Lockhart, of the Minneapolis Fire Department under the 65-year compulsory retirement act, ends a fire fighting career that spans an era. As a Minneapolis paper said "The Lockhart era might well be called 'from thundering hoof to two-way radio'."

When Chief Lockhart entered the Minneapolis Fire Department in 1905, horses drew the apparatus. Telephones were scarce and most alarms came in via telegraph boxes.

Chief Lockhart's father Sam Lockhart, was a fireman. The retiring chief's son, A. M. Lockhart, has been in the Minneapolis Fire Department 19 years and is a candidate to succeed his father as chief. The Chief's father retired in 1916, after being in the department 22 years.

When the first motorized pumper was acquired in 1915, Lockhart was a member of its crew. Prior to that he served on Ladder 2. His experience and training stood him in good stead for promotion, which was made a grade at a time, until he was made Chief in 1945 upon the retirement of the then incumbent.

During his tenure of office, Chief Lockhart saw many improvements made in the department, including installation of two-way radio on practically all fire apparatus; replacement of outmoded equipment; addition of 2,000 G.P.M. pumpers, metal aerial ladders, fog nozzles and other innovations. From his earliest days as an officer, Chief Lockhart took an active interest in firemanship training. Before promotion to chief he served as drillmaster.

Chief Lockhart was an active member of the International Association of Fire Chiefs. He served on several of its committees and also appeared on a number of its convention programs. He also took a keen interest in the Fire Department Instructors' Conference and in other organizations and activities of, and relating to, the fire service.

Booth and Fleming Retire from N.B.F.U.

Two outstanding figures in the field of fire protection retired from the National Board of Fire Underwriters on December 31.

They are George W. Booth, chief engineer of the National Board for the past 39 years, and T. Alfred Fleming, head of the National Board's department of conservation for the past 30 years.

Booth is a recognized authority on water supply systems, which are of vital importance in modern fire fighting. Early in his career, he made a special study of New York City's water distribution system, and discovered several examples of heavy wastage of water.

In 1909, Booth recommended the installation of water meters as a means of preventing water supply crises in New York City and other large cities. He repeated that recommendation on the eve of his retirement.

A graduate of Worcester (Mass.) Polytechnic Institute, Booth worked with the Massachusetts Board of Health and the Massachusetts Metropolitan Water Board before joining the National Board in 1904.

In the 39 years since his appointment as chief engineer, the artivities of the engineering department have been expanded greatly. The National Board now inspects 460 American cities periodically, checking their water supplies, fire fighting facilities, and conflagration hazards. The engineering staff studies hazardous materials and processes, publishes Standards for safe operation of many processes and safe storage of dangerous materials, and also publishes a model Fire Prevention Ordinance which has been widely adopted by American cities.

Photo from National Board of Fire Underwriters

George W. Booth, Shown Examining a Map Prepared by Engineers on His Staff, Retired as Chief Engineer of the National Board of Fire Underwriters on December 31

Booth plans to retire to his farm in Lebanon Township, New Jersey, and to devote his time to a private reforestation project in which he has been interested for a number of years.

Fleming, who is retiring as head of the department of conservation, decided to devote his life to fire prevention efforts after viewing a tragic school fire which cost the lives of 175 children and teachers.

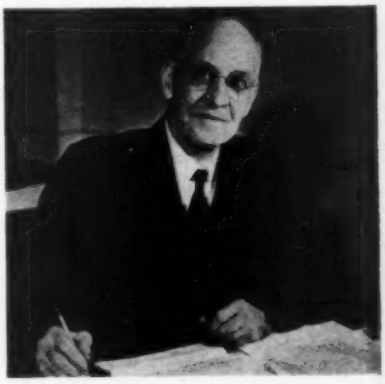


Photo from National Board of Fire Underwriters

T. Alfred Fleming, Who Retired as Head of the Conservation Department of the National Board of Fire Underwriters, Is Shown at His Desk

He was in Collinwood, Ohio, on March 4, 1908, when fire broke out in Lakeview Grammar School. He rushed to the scene. Fire had cut off the front

exits, and flames could be seen through the lower windows.

He then ran to the rear of the school building, and discovered that the exit door there was shut tight—and locked. He joined with others in an effort to open it, but this required the use of a crowbar, and a delay resulted. When the door was finally opened, countless bodies were piled high at the foot of the stairs.

He developed an intense interest in fire prevention as a result of that experience, which led to his appointment as state fire marshal of Ohio in 1917, and election to the presidency of the Fire Marshals Association of North America in 1918.

Fleming was born in Owen Sound, Ontario, Canada, on June 23, 1874, and was a minister for ten years. In 1915 he served as secretary of the Department of Welfare of the city of Cleveland, and in 1916 he was elected to the Ohio legislature.

He recalls that his first fire prevention talks were interrupted by firemen who demanded: "What are you trying to do —put us out of work?"

"There has been a complete change in the public attitude toward fire safety efforts in the past thirty years," Fleming says. "Today, firemen, businessmen, workers, housewives, and everyone else offer enthusiastic support."

Fleming has spoken before thousands of audiences in all parts of the United States and Canada, and has written several hundred articles on fire safety.

Upon his retirement, he plans to "get acquainted" with his family, and spend his time in a home he built himself on Georgian Bay.

Chief John Slattery Weds

Fire Chief John A. Slattery, of the Rochester, N. Y., Fire Department, and Mary Leary, a teacher at Public School 19, Rochester, for 28 years, were married December 27, 1948, in St. Monica's Church, that city.

After the ceremony the chief and his bride walked from the church under an archway of gleaming fire axes held by members of his organization.

Obituaries

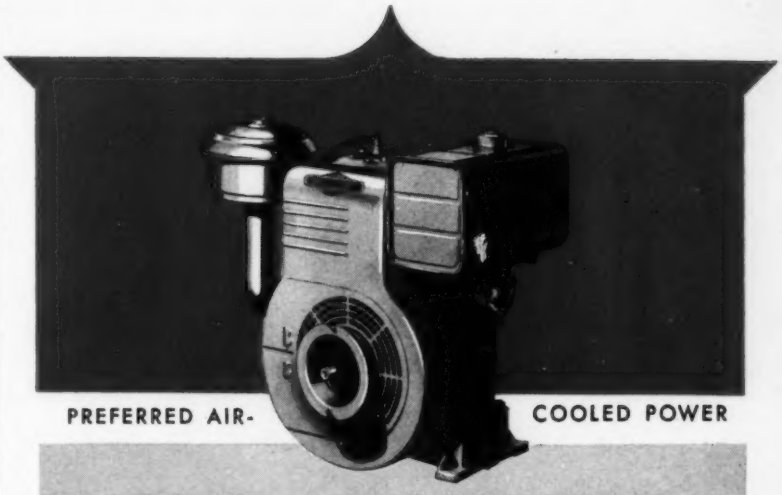
C. G. Lauber Dies Suddenly

Calvin G. Lauber, who became acting chief engineer of the National Board of Fire Underwriters on January 1, collapsed in front of the National Board building, 85 John Street, Wednesday afternoon, January 4, and was taken to Beekman Downtown Hospital where he was pronounced dead. Mr. Lauber was 55 years old.

He was on his way to his home at 51 Old Mill Road, Manhasset, L. I. A few minutes before he left his office he had received word of the death of his father, Henry T. Lauber, 87, who resided with him.

His death came just three days after he had assumed the highest engineering post with the National Board of Fire Underwriters, succeeding George W. Booth, who retired on December 31, 1949, after 39 years as chief engineer.

Mr. Lauber had served the National Board of Fire Underwriters for 30



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years, with the exception of 13 years service as fire marshal of Washington, D. C., from 1930 to 1943. He returned to the National Board in 1943, and in 1948 was appointed assistant chief engineer.

A graduate in industrial electrical engineering at Pratt Institute, Brooklyn, in 1916, Mr. Lauber served as a second lieutenant in the U.S. Army Signal Corps in World War I and as a fire alarm engineer at Underwriters' Laboratories, Inc., New York, before joining the National Board of Fire Underwriters.

In 1947 Mr. Lauber served as a technical consultant for President Truman's National Conference on Fire Prevention. He was a member of the executive committee of the National Fire Waste Council.

Mr. Lauber leaves his wife, Lillian, and two daughters, Mrs. William H. Vandenberg, of 31 Ravenwood Avenue, Rochester, N. Y., and Henrietta, who is a student at Tufts College, Medford, Mass.

Annual Reports Received

Alameda Issues Report and Fourth Yearbook

With the workmanlike report of Fire Chief Thomas M. Lane for the fiscal year 1948-1949, the Alameda, Cal., Fire Department also distributed its Fourth Fireman's Yearbook. The purpose of the latter is to remind people of the need for fire prevention. The statistical report describes the operations of the fire department in extinguishing fires.

The yearbook is plentifully illustrated and pictures the fire stations and crews of the department. It includes a map of the city and, believe it or not, contains such miscellaneous, information as "Firemen's Recipes for Firehouse Cooking" and "What Every Baby Sitter Should Know."

* * *

Elaborate Sacramento Report and Yearbook

Good public relations is a modest term for the Annual Report and the Fire Prevention Manual, or Yearbook of the Sacramento, Cal., Fire Department, Terence Mulligan, Chief.

Each year the Department issues through the Sacramento Fire Prevention Committee an elaborate Fire Prevention Manual, which is replete with plans and ideas for preventing fires and building good will for the local and suburban fire forces.

Currently with this publication, the Department issues its bound annual report, a concise and complete record of fire losses and fire department operations. In 1948 there were 1,007 fires, compared with 876 for the year previous. Fire losses were $497,490, as against $262,703 for the year before. In responding to 3,668 "runs" the department covered 6,324.5 miles.

* * *

California Training Program Registered 2056

The Annual Report of the California Training Program for 1948-1949, issued by the State Department of Education, and prepared by Thomas S. Ward, Special Supervisor and Instructor of Fire Training, shows 41 Zone Classes and 57 Departmental Classes held during the year. 857 men, from 97 fire departments registered for the Zone Classes, and 1,199 men registered in the Departmental

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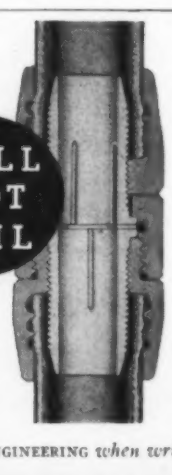

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Classes. All told, 1,745 class hours of instruction were given.

The California program is conducted by the Bureau of Trade and Industrial Education of the State, cooperating with the California fire service organizations under a State Fire Advisory Board.

It is planned to build a modern fire station, at Napa Junior College with domitory space for 16 students, and equip it with apparatus, somewhat similar to that employed in the State of Maryland.

The report documents the training activities of regions and zones throughout the State.

* * *

Los Angeles Report Comprehensive

The 63rd Annual Report of the Department of Fire, City of Los Angeles, John Alderson, Chief Engineer, for the year ending June 30, 1949, is a comprehensive, buinesslike document. In its 54 printed pages, it not only gives the statistics of all fires and methods of extinguishment, the fire losses, fire department strength, etc., for the period, but it details the work of the various bureaus and branches of the Department, each as an individual accounting of stewardship of the respective Bureau commanding officer.

Total fire losses for the period were $3,053,808. Cost of total equipment for the period was $533,700.79. The total disbursements for the year 1948-1949 were $10,701,450.26, which includes $9,857,926.80 for salaries.

* * *

More Fires, Lower Losses in Portland

The Annual Report of Portland, Ore., Bureau of Fire, Edw. Grenfell, Chief, for the fiscal year July 1948 to June 1949, shows the bureau responded to 4,986 alarms. Property loss was $1,126,040.71. This was an increase of 451 fires, but a loss reduction of $92,792.88 from the same period a year before.

The 88-page Report is a complete statistical summary of fire department operations, fire losses and other pertinent information.

* * *

Kent County, England, Issues First Report

The First Annual Report of the Kent Fire Brigade, Chief Officer J. H. Fordham, for the period April, 1948, to March 31, 1949, is an informative document. Its statistics cover "ocurrences" dealt with by the Brigade, reports of fires, and "special services" of unusual interest.

The Kent Brigade serves an area of 975,960 acres, with population of about 1,500,000 and "ratable value" of 11,677,837 pounds.

Of the 5,724 calls responded to by the Brigade, 2,414 were actual fires, other than for chimneys and mutual aid responses. "Malicious false alarms" were 283 and "false alarms of good intent" were 441. The Brigade responded to 232 mutual assistant calls and the "special services" reported totalled 462.

Considerable space is given to the activities of the Fire Prevention Division, as well as the organization and headquarter's staff; communications; training; water and ambulance sections.

Not unlike the fire forces of this nation, Kent firemen are called upon for many "X-curricular" tasks. Among those oddities noted are: Providing access to town hall clock for repairs; cleaning gutter on roof of public building; reducing

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Precision Built
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temperature of a building housing spirit products; assisting in worm-pest control; flushing sewers; getting a model airplane out of tree; removing cow from well and pit, and getting children and adults out of various traps, including a milk churn.

Winners in Fire Prevention Contest Announced

The city of Memphis, Tenn., was chosen from 3,762 American and Canadian municipalities, fire departments and military establishments as winner of the annual National Fire Prevention Week contest, it was announced on December 27.

Sponsored for the 26th year by the National Board of Fire Underwriters and the National Fire Protection Association to judge the fire-safety efforts of cities and industries during the annual National Fire Prevention Week in October, the competition was broadened this year for the first time to include U. S. Army, Navy and Air Force Bases. Of the 3,761 entries, 2,608 were from United States municipalities, 648 from Canadian cities, 34 from industrial plants in the United States and Canada, 194 Army, 252 Navy, and 26 Air Force bases, with reports coming from as far as Saudi Arabia.

Second and third places among the U. S. cities went to Atlantic, Iowa, and Ft. Collins, Colo., respectively. The first place winning city in Canada was Arvida, Que., with Ottawa, Ont., in second place.

In the industrial plants division, Delco-Remy Division of General Motors, Anderson, Ind., won first place. For military bases first place was awarded to; Memphis General Depot, U. S. A., Memphis, Tenn., among the Army reports; Naval Supply Annex, Stockton, Calif., for Navy reports; and Tinker Air Force Base, Oklahoma City, Okla., for Air Force entries.

This year's entries were an increase of 834 over the last year when Oak Ridge, Tenn., won first place, according to T. Alfred Fleming, director of conservation of the National Board of Fire Underwriters, and chairman of the contest.

Mr. Fleming pointed out that cities of more than a million population have a much harder job to put on demonstrations that will reach their huge numbers of residents. Therefore, he wished especially to commend the cities of Chicago, Ill., and New York, N. Y., for their efforts. Both placed among the ten highest entries. Reports were marked according to a point system for their activities and the actual reduction in fires that resulted from them.

An international committee of judges based its decisions on the scrap books, clippings, photographs, records and motion picture evidence of activities during Fire Prevention Week, October 9-15 and Spring Cleanup Week.

Judges were: William B. Rearden, executive vice-president of the Firemen's Insurance Co. of Newark and chairman of the Committee on Fire Prevention and Engineering Standards of the National Board of Fire Underwriters; Allen L. Cobb, vice-president of the National Fire Protection Association and safety supervisor of Kodak Park Works, Eastman Kodak Co., Rochester, N. Y.; Fred Shepperd, technical consultant, International Association of Fire Chiefs; and A. Leslie Ham, manager, Dominion Board of Insurance Underwriters, Montreal.

Memphis was chosen first for its extensive work in every phase of community activity. Mr. Fleming said that the judges felt its report showed "a complete all-round program involving features which might influence fire prevention and protection on a permanent basis. It shows results in the reduction of fire losses which is the cumulative effect of an educational campaign."

Atlantic, Iowa, was rated highest among those municipalities with volunteer fire departments. Others which were in the 90 to 100 per cent class are, in the order of their ratings:

Ft. Collins, Colo.; Fort Wayne, Ind.; Chicago, Ill.; Louisville, Ky.; Jersey City, N. J.; Los Alamos, N. Mex.; New York City; Providence, R. I.; Knoxville, Tenn.; Nashville, Tenn.; Cincinnati, Ohio; Fayetteville, N. C.; Corpus Christi, Texas; Norfolk, Va.; Tuscaloosa, Ala.; Hartford, Conn.; Decatur, Ill.; Anderson, Ind.; Cedar Falls, Iowa; Baton Rouge, La.; Staten Island, N. Y.; Allentown, Pa.; Columbia, S. C.; Abilene, Texas; Richland, Wash.; Vancouver, Wash.; Parkersburg, W. Va.; and Stevens Point, Wis.

The top Canadian cities in the 90 to 100-point bracket are: Arvida, Que.; Ottawa, Ont.; Sherbrooke, Que.; Hamilton, Ont.; Hull, Que.; Kitchener, Ont.; Kentville, Nova Scotia; Brantford, Ont.; Edmonton, Alta; Galt, Ont.; Noranda, Que.; Malartic, Que.; Jonquiere, Que.; and London, Ont.

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Division, Rayon Dept., of Waynesboro, Va.; Servel Electrolux Co., Evansville, Ind.; U. S. Atomic Energy Co., Chicago, Ill.; Aluminum Co. of Canada, Arvida, Que.; General Electric Co., Ft. Wayne, Ind.; International Harvester Co., Ft. Wayne, Ind.; and Sears, Roebuck and Co., Minneapolis, Minn.

Book Shelf

FIVE ALARM—THE STORY OF FIRE FIGHTING. By John J. Floherty. Published by J. B. Lippincott Company, New York; 149 PP; $2.50.

The author, "Jack" Floherty to his many friends, is a volunteer fireman in his own right. He is known to thousands of young people the country over for his numerous other books on pertinent topics which have found a place in school and public libraries.

"Five Alarm" tells in eleven interesting chapters, many important phases of fire control. The author has embellished his facts about fire protection methods and facilities with many historical and human interest anecdotes of the fire service, particularly that of the volunteers.

Among the subjects covered in the book are accounts of the great Chicago Fire; the work of the arson investigators; the fellowship of the volunteer firemen; fire control in city, country and forest; marine fire fighters; fire fighting of yesterday and today, and stories of the fire fighter's life and training.

The book is well illustrated with photographs of fire scenes and other interesting episodes in the fireman's life.

Although primarily intended for young people, "Five Alarm" should find a welcome place in the library of every grownup to whom the business of fire protection and prevention is paramount.

BUILDING MATERIALS AND STRUCTURES REPORT BMS 116, PREPARATION AND REVISION OF BUILDING CODES, by George N. Thompson,17 large double column pages, 15 cents, available from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. Remittances from foreign countries must be in United States exchange and must include an additional sum of one-third the publication price to cover mailing costs.

Individuals or organizations responsible for the preparation or revision of building codes will find many helpful suggestions and much valuable information in a new booklet, *"Preparation and Revision of Building Codes,"* recently published by the National Bureau of Standards and now available from the U. S. Government Printing Office.

This booklet discusses principles and problems associated with building-code requirements, give information on useful source material and its application, and attempts to indicate a procedure by which full advantage may be taken of new developments in materials and techniques without neglecting public safety. In general, an effort is made to provide local committees with sufficient information to permit them to accomplish their work with a minimum of lost motion. Typical subjects discussed include advantage of using national standards and ways of referring to them, methods of recognizing new materials and construction methods, extent of delegation of authority to the building official and safeguards against arbitrary action.

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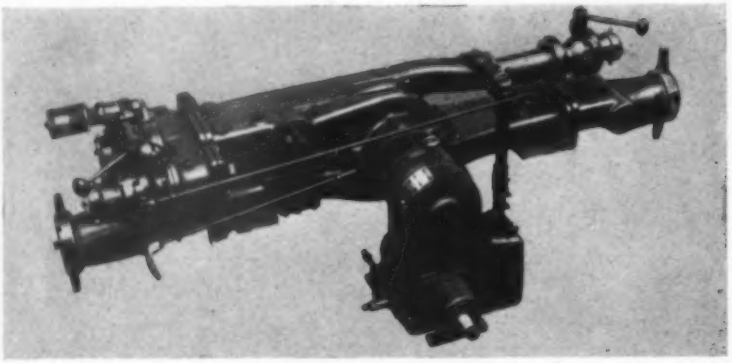

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Questions and Answers

Standardization of Fire Apparatus

To the Editor:

What are the advantages and disadvantages of standardization of fire apparatus? G. H. B.

Answer: In favor of standardization, particularly where one make of apparatus may be adopted by a fire department, are the following points:

The inventory can be smaller, as fewer replacements parts are needed for a single line of fire apparatus.

Servicing and repairing are made easier, for the shop men will be better acquainted with the limited number of designs.

The greater familiarity of operators with the apparatus will be of considerable benefit, for each operator would know the operations of all apparatus. This will be valuable in the event of a large fire where off-shift men are called in, or where operators are transferred from one company to another.

Where the apparatus is of one make, better servicing on the part of the manufacturer may be expected. It is more economical for a manufacturer's engineer to visit a city and make periodical checkups of apparatus if he has a sufficient number to warrant periodical trips.

Opposed to the standardization of apparatus may be offered the following:

If one particular make of apparatus is adopted, competitive bidding will be checked, and the city may have to pay more for apparatus.

If design is standardized, then the concern which is able to build it the cheapest and still "get by" the specifications would be the one who would get the business.

Where a standard design of appartus has been decided upon, it is usually impossible to take advantage of special features developed by certain makers. Sometimes these features are oustanding, and the fire department would be justified in paying additional price for the apparatus to take advantage of these developments.

When Three Pumpers Supply a Deluge Set

To the Editor:

Three fire engines are pumping, one line each, into a deluge set. One pumper is operating at 120 pounds, one at 110 pounds and the other at 100 pounds. I have been advised that the clapper valves in these deluge sets operate at one-half pound pressure. If this is true, wouldn't only the 120 pound line deliver water, or will all three and why?—E. E. R.

Answer: In order to discuss the problem you submit, we shall number each line and each engine. We shall assume that Engine No. 1 is pumping at 120 pounds through line No. 1; Engine No. 2 is pumping at 110 pounds through line No. 2, and Engine No. 3 is pumping at 100 pounds through line No. 3. These

three lines are siamesed into a deluge set.

Now in order that we can discuss the problem on a factual basis, we have to assume lengths of the three lines of hose. We shall assume that each is 500 feet in length and each is 2½ inches in diameter. We shall further have to assume a size of nozzle on the deluge set. This will be taken as 1⅝ inches in diameter.

With this layout, the nozzle pressure will be approximately 60 pounds, and the discharge will be 607 gallons per minute.

Now assume, as you say, that the clapper valves on the lines supplied by Engines 2 and 3 close. Then Engine No. 1 will not be able to maintain 60 pounds at the nozzle, for 60 pounds, representing a flow of 607 gallons per minute, would indicate a friction loss of about 57 pounds per hundred feet, or a total friction loss of 375 pounds. Of course, an ordinary pumper could not discharge 607 gallons of water per minute at a total pressure of 435 pounds (375 pounds friction loss plus 60 pounds nozzle pressure). Thus the nozzle pressure would be less than 60 pounds. And if the nozzle pressure drops to less than 60 pounds, both Engines 2 and 3 will resume discharge of water into the deluge set. Actually, with a layout of this type, all three engines will be operating as long as the pressure at the deluge set is less than the pressure at the engines (neglecting, for the moment, the pressure required to operate the clapper valves). If we take this latter pressure into account, which you state, is around a half pound per square inch, then we might accurately say that any pump will be operating as long as the pressure at that pump is more than one-half pound greater than the pressure at the deluge set.

You will appreciate that the flow from any one pumper might be made so small as to represent practically no friction loss in the line of hose it supplies; hence, the above statement regarding each pumper discharging water through its line into the deluge set can be understood.

Flash Point, Etc.

To the Editor:

Please define "ignition point," "burning point," "kindling point" and "flash point."

Which of the following has the lowest burning point: (a) gasoline, (b) kerosene, (c) fuel oil or (d) benzol? J. T. O.

Answer: By ignition temperature (ignition point) is meant the minimum temperature required to initiate or cause self-sustained combustion independently of the heating or heated element.

Burning point (of a flammable liquid) is that temperature at which a flammable liquid gives off vapor at a sufficiently rapid rate to maintain continuous combustion.

Burning point (in general) is the temperature at which a substance will take fire.

The kindling point may be described by the definition of burning point as generally used. This is the temperature at which a substance will take fire. It is applied to solids, rather than liquids.

The flash point is the temperature at which a flammable oil gives off vapor

POWHATAN in 1950

ANOTHER year in which you can rely upon the same high standards of service and dependability which has made the name of POWHATAN stand for Quality Fire Department Brass Goods down through the years since 1892.

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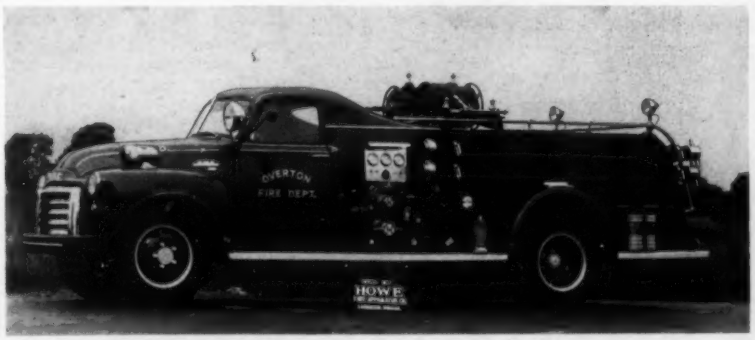

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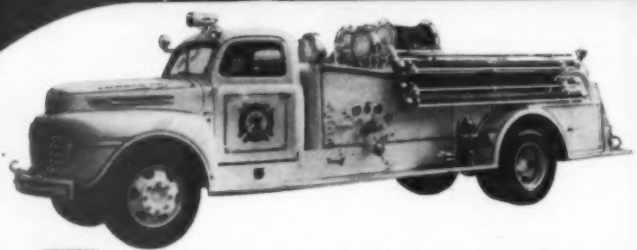

Above: 500 G.P.M., 3-stage pumper mounted on Ford F-7 chassis, delivered to Lowber, Pa. Two 1000-watt floodlights at rear of cab. Heavy-duty bolted construction. All Centralengineered safety features.

Dozens of wanted, built-in features, dictated by over 30 years combined experience make the Central 1950 models tops in the fire-fighting field. Dollar for dollar, you can't match a Central pumper's all-around ruggedness and years' ahead design. They are proving their worth daily in hundreds of communities from coast to coast.

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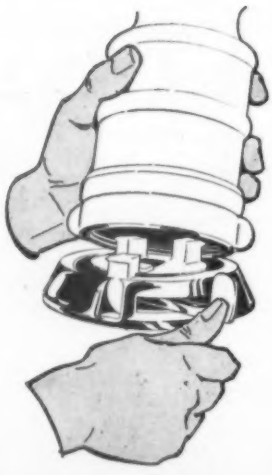

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sufficiently fast to cause the vapor to flash, or burn instantaneously, when ignited (the vapor will not continue to burn, for it is given off too slowly to support continuous combustion).

The burning points of the various liquids you list are as follows.

a. Gasoline: 495 to 570 degrees F.
b. Kerosene: 482 to 563 degrees F.
c. Fuel oil: 490 to 765 degrees F.
d. Benzol: 1,000 degrees F.

From the above, certain types of kerosene would have a lower burning point than any of the other liquids listed.

Fire Chief Urges Preparedness and Training

(*Continued from page 36*)

fied that his room is empty, he reports to the floor warden, giving full information of his room conditions and awaits further orders from the floor warden. When told to rejoin his class on the ground level, he proceeds via the proper exit, checking to see that no one is left behind or re-entering the building without proper authority. He then reports the conditions of his room to the teacher.

Duties of Traffic Patrol

When given orders by the teacher to take his post the traffic patrol goes to his assigned exit, opens the doors and checks to see that exits are not obstructed and reports conditions of exits to teachers when the latter reach the exit. When satisfied that all classes using his particular exit have passed out, the patrol takes position to the rear of the last column to see that no stragglers are left behind.

Duties of First-Aiders

The teacher will assign two first-aiders for each crippled or sick pupil in the class. These first-aiders shall be selected for their strength and level-headedness. It is their primary task to see that the crippled and/or sick children reach the ground level safely and with due care. After reaching their class group, they report to the teacher.

Duties of the Janitor

It is the janitor's regular duty to maintain the premises in as safe a condition as possible, practice good housekeeping and keep the principal informed of conditions at all times. In case of fire or other emergencey, his primary job is to see that all motors and heating and cooling equipment are shut off, after which he shall report to the location of the fire and then man first-aid fire equipment. Should he discover the fire, he will first report it to the fire department, and then he shall report it to the principal, from whom he will take instructions.

Duties of Fire Marshal

The principal appoints the fire marshals in sufficient number to cover the entire building. He also assigns specific areas to each marshal. It is the marshal's duty to daily check his assigned area for housekeeping conditions, fire hazards, etc. He also checks doors and panic-bars to see that they function properly and he makes sure that exits are not obstructed in any way. He reports hazardous conditions immediately to the principal in writing who, in turn, notifies the janitor to correct them. The marshal

must also make weekly reports to the principal on forms furnished him. At the time of fires, fire drills or emergencies, he will carry out the orders of his teacher.

Instructions to Pupils

They are instructed what to do in time of emergency; the main objectives being to remain calm, not to run, push or try to pass others in making their exit; to have confidence in their teachers and to keep quiet and orderly.

News of the Manufacturers

(*Continued from page* 43)

new, portable six pound carbon dioxide fire extinguisher with 20% additional fire-fighting capacity.

Randolph "6" is a compact, lightweight unit, featuring thumb-trigger release and self-aimed nozzle.

The extinguisher contains six pounds of carbon dioxide gas, and is especially adapted to smother flammable liquid and electrical fires. The "6" is approved by the Underwriters' Laboratories.

Civil Defense Decentralized

The following ten points set forth the views of the National Security Resources Board "as to the manner in which the federal government will deal with state and local governments in civil defense matters."

It was mailed to all state governors because NSRB expects to deal with the states and assumes the states will maintain proper coordination with local government units.

1. The Chairman and staff of the National Security Resources Board will deal directly with state governments, or through state governments with political subdivisions within states.

2. Information or advice by NSRB will be channeled to states; it is assumed that states will relay the same to their political subdivisions when appropriate.

3. Requests for information or advice received from political subdivisions may be answered directly with copies of the correspondence going to the appropriate state government; however, requests of this nature will be referred to state governments for direct reply as state facilities for processing them are developed.

4. NSRB will look to various agencies of Federal Government for the development of civil defense plans and preparedness measures. When understandings are reached regarding assignments of this nature, state governments will be notified. Where other Federal agencies, are involved in civil defense planning assignments which require the maintenance of channels of communication with state and local governments, they will be guided by the policies outlined in paragraphs 1, 2 and 3 above.

5. NSRB will maintain contact with national organizations in the field of state and local government on civil defense planning matters for the purpose of:

   a. Securing from them current statistical data and other types of general information; and

   b. Keeping them informed of civil defense activities of the Federal Government.

6. The NSRB will encourage states to adopt civil defense legislation which:

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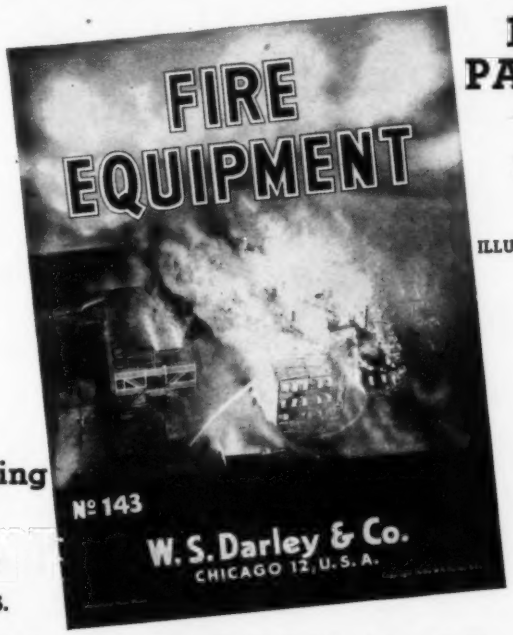

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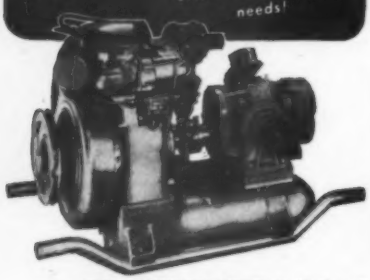

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a. Creates a state civil defense planning body;

b. Provides for civil defense planning bodies in its political subdivisions;

c. Charges the state officials and subordinate planning bodies with responsibility for both peacetime and wartime disaster relief planning and preparedness measures.

7. Although the report of the Office of Civil Defense Planning entitled "Civil Defense for National Security," known as the "Hopley Report," has not been officially adopted, the NSRB does believe the report to be a usefule guide to the substantive areas in which planning must be done for federal, state and local civil defense.

8. The Federal Government is not prepared at this time to furnish state and local governments all of the information and guidance needed by them from federal sources to prepare well-integrated and timely civil defense plans for state and local use in emergency. While the agencies of the Federal Government are working toward the fulfillment of these needs, the NSRB will encourage state and local governments to proceed as far as practicable with their civil defense planning. In the process of this planning, it would appear advantageous in the immediate future for the State and local governments to place major emphasis on plans for relief from the effects of peacetime disasters. The experience gained in dealing with peacetime disaster, if carefully evaluated, can constitute a realistic frame of reference against which wartime civil disaster planning can be appraised.

9. The NSRB, directly or through other Federal agency channels, will transmit to states:

a. Information on activities in other states.

b. Information on activities of Federal agencies.

c. Policy guidance and planning criteria.

10. The NSRB and other Federal agencies will solicit from states current information as to progress in state and local civil defense planning.

(The above is reprinted from "Minnesota Municipalities," Nov. 1949, to whom the data were supplied by the American Municipal Association.)

Kansas Starts Statewide Fire Training Program

After many years of planning, the state of Kansas now has a statewide firemanship training program. The program is directed by University Extension, University of Kansas, in cooperation with the State Board for Vocational Education and the Kansas State Fireman's Association.

The training under the supervision of Keith Royer, former member of the Wichita Fire Department, has been in operation since August 1, 1948. This program is operating on the circuit plan. Five towns are selected in the same area, one night a week is spent in each town, for five weeks. Each department receives a total of fifteen hours of training.

The training is practical, and only the equipment that each town has is used. A general outline of the training includes, hose and ladder practices, pump operation, water supply and fire streams, fire fighting tactics, salvage and overhaul, ventilation, first-aid ex-

tinguishers and actual demonstrations.

This program is being accepted with a lot of enthusiasm and interest. From comments throughout the state it seems to be meeting a definite need in the Volunteer departments.

Another instructor will be put on the road after the first of the year to help meet the growing demand for this service.

Blaze Levels Novelty Plant

The shop of the Millaco Manufacturing Corporation, operating in a converted hangar adjacent to the Bridgeport Municipal Airport at Stratford, Conn., was swept by fire on December 11, causing damage estimated at $55,000. Damage to the stock and materials was estimated at $40,000 by Kenneth B. Morrison, Vice-president of the Millaco Corporation. The company manufactured lipstick cases, cigarette lighters, atomizers and similar articles.

According to Asst. Fire Chief Theodore Lockwood of the Stratford Fire Department, the blaze started about 2 A.M., in the northweast section of the one-story cement block and wooden building, which was once used as an airplane hangar, and spread rapidly to the wooden beams of the structure. Flames burned off approximately half of the tin covered wooden roof.

The fire was discovered by Edward Mills, Night Superintendent at the airport, and David Adler, observer on duty at the Weather Bureau station. Mr. Adler telephoned the Bridgeport Fire Department and Robert McCosker, control tower operator, at the same time notified the Stratford Fire Department. The airport, while located in the town of Stratford, is owned by the City of Bridgeport.

Bridgeport firemen from Engine No. 8, Newfield Avenue, and Truck 6 and Squad 6, responded under command of Asst. Fire Chief Raymond F. Sullivan, and were forced to use more than 1,000 feet of 2½-inch hose from the nearest hydrant on South Main Street to reach the burning structure. Firemen remained at the scene for three hours.

The Millaco Corporation moved into the building in September. The loss was covered by insurance.

TOM MAGNER

Southwest Research Institute Appoints Counsellors

Twelve leading authorities on fire protection, prevention and control have accepted appointment to the Board of Counsellors for the Fire Technology Division of Southwest Research Institute of Houston and San Antonio, Dr. Harold Vagtborg, Institute President, announced recently.

The Division, Dr. Vagtborg said, will work scientifically on reducing the toll of human lives and property loss from fire, utilizing the staff and laboratories of the Institute and the ample testing areas of Essar Ranch near San Antonio in applying advanced techniques of analysis and research to fire problems whose destructive effects are mounting annually.

Appointment of the Counsellors, Dr. Vagtborg continued, completed the organizaton of the Division which is being directed by Norman Penfold, assistant to the institute president. Mr. Penfold is an Armour Institute of Technology graduate engineer whose special fields of

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reasearch include fuels, heat and combustion.

In addition to furnishing companies research services at cost, the Division is undertaking fundamental research programs in the physical and chemical aspects of fire, combustion and explosions in order to expand scientific knowledge of these phenomena, Dr. Vagtborg said.

Members of the newly-appointed board of councillors are John H. Alderson, Chief of the Los Angeles Fire Department, Los Angeles, Calif.; Colonel H. S. Bennion, Executive Vice President of the Edison Electric Institute, New York City; Captain H. J. Burke (USNR), Former Chief of the Fire Department, New York City, and Former Head of the Damage Control and Fire Fighting Section of the Navy Bureau of Ships, Newark, N. J.; Ned H. Dearborn, President of the National Safety Council, Chicago; J. J. Duggan, Chief of the Equipment Safety and Control Department, Carbide and Carbon Chemicals Corporation of South Charleston, W. Va.; George C. Hawley, Chief Engineer of the Texas Board of Insurance Commissioners, Austin, Texas; J. E. Jagger, General Manager of the International Association of Fire Chiefs, New York City; G. M. Kintz, Supervising Engineer, U. S. Department of the Interior, Dallas, Texas; Fred Shepperd, Editor of FIRE ENGINEERING, New York City; Arthur C. Kreutzer, Managing Director of the Liquefied Petroleum Gas Association, Inc., Chicago; Ray Wisner, Chief Engineer, Insurance Department, United States Steel, Pittsburgh, Pa., and Carl Wolf, Managing Director of the American Gas Association, New York City.

What's Burning

THE following list includes fires of $10,000 loss and over in the United States and Canada for the month of December, 1949.

Month Ending December 31, 1949

Los Angeles, Cal.—A. A. Goodman Lumber Yard, destroyed.
Carthage, N. C.—Whse. of Smothers Bros. Tobacco Co. destroyed; equip. of Ben Premier shows, stored in whse., destroyed.
Chillicothe, Ohio—Two-story 48-stall stable at Ross County Fair Grounds, damaged.
Albion, Pa.—Albion Fire Hall and adj. dwelling of Charles B. Warner, destroyed.
Norfolk, Va.—Main plt. of Richard Cedar Works, Great Bridge, destroyed.
Charlotte, N. C.—Piedmont Auto Exchange damaged.
Neenah, Wis.—Meyer Burnstein & Sons, rug processing mill, damaged.
Toronto, Ont.—Bldgs. occupied by K & E Transport Co., Raitar Transport Co., Crawford Watts Shoreline and Weight Transports, destroyed.
Denver, Colo.—Factory of Great Western Mushroom Co., eight miles north, destroyed. Overheated boiler.
Statesboro, Ga.—Ellis Furniture Co. destroyed. Defective wiring.
Centralia, Mo.—Panhandle Eastern Gas pipeline, damaged.
Tulsa, Okla.—The West Tulsa Refinery of the Texas Co. gasoline blending plt., damaged.
Paoli, Pa.—Washington Lane Construction Co., repair shop, destroyed.
Philadelphia, Pa.—Sanitary Laundry damaged. Short circuit.
Loraine, Tex.—Cotton whse. of J. L. Pratt & Son, destroyed.
Colville, Wash.—Strauss dept. store, destroyed. Spontaneous ignition.
New Liskeard, Ont.—New Liskeard United Church destroyed.
Los Angeles, Cal.—Utility Supply Co. damaged.
Chicago, Ill.—Plt. of Standard Stamping & Perforating Co., damaged.
Man, W. Va.—West Virginia Liquor Commission store damaged.

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...the Gas Mask that Checks HUFF and PUFF

You can wear the Acme Full-Vision Gas Mask two or three times as long as others without worrying about "huff and puff." An exclusive Acme feature, the Dead Air Check Valve, actually limits the amount of carbon dioxide the wearer rebreathes and thus helps to check breathing difficulties at their source.

This is another Acme innovation that proves that protection can be comfortable.

Write for the complete story on Acme Gas Masks for fire fighting.

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RUBBER = CANVAS

FIRECOATS
FIREPANTS
All Wool
Detachable Linings
Mittens
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FOR COMFORT & PROTECTION
Send for Descriptive Circular
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1986 Home Avenue, Dayton 7, Ohio

INVINCIBLE NOZZLES

with HOSE MANIFOLD

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Just another type —one of many— made by pioneers in nozzle manufacture.

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"All American Choice"

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Seldom the lowest priced but always the best.

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F. N. McINTIRE BRASS WORKS

Successors to A. J. Morse & Son, Inc.

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Union Made Prompt Delivery

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AMERICA'S UNIFORM CAP HEADQUARTERS

WENTWORTH

FORMAN CO., INC.

21-23 EDINBORO ST., DEPT. F.

BOSTON 11, MASS.

Los Angeles, Cal.—Monarch Plastic Co. plt., machinery and materials, destroyed. Explosion in hydraulic line.
Denver, Colo.—Seven store bldg. occupied by Denver Stove House, Commercial Copying Co., Bargain Book Store, Clifton Hotel, University Inn, Wholesale Gift Shop, destroyed.
Des Moines, Ia.—Bldg. occupied by Jaeger Mfg. Co., whse., Old Style Lager, Inc., and Shelley Beverage Co., destroyed.
West Stoughton, Mass.—Whse. of Rock Mfg. Co. destroyed.
Caruthersville, Mo.—Ward-Coppage Mercantile Co. cotton gin and elevator, damaged.
Sedalia, Mo.—Missouri-Pacific Railroad shop damaged.
Buffalo, N. Y.—Central Garage and Firehouse Bldg. at Lackawanna plt. of Bethlehem Steel Co., damaged.
Sherman, Tex.—Two cotton mill whses, destroyed.
Petersburg, Va.—Ideal Garage Co. bldg., U. S. Route 301, 13 miles south, destroyed. Oil stove.
Chicago, Ill.—Negro country club "Wayside" destroyed.
Three Rivers, Mich.—Johnson Corp. plt., metal joints and devices, damaged.
Binghamton, N. Y.—Business block occupied by drug store and apts., damaged.
Wister, Okla.—Dwelling of John Ballentine destroyed; also business bldg. occupied by barber shop, cleaning shop and doctor's office.
Savannah, Tenn.—Hardin County courthouse destroyed. Defective heating plt.
Seattle, Wash.—Milwaukee Road Ski Bowl, Snoqualmi Pass, lodge house, destroyed.
Rushville, Neb.—Poll Hall, bar and cocktail lounge, destroyed.
Barberton, Ohio—Simon's Jewelry Store, damagedd.
Glen Riddle, Pa.—The main plt. of the Sunroc Refrigeration Co., damaged.
Deer Lodge, Tenn.—Plt. of J. M. Bowling Lumber Co. damaged. Dwelling, store and garage of Randall G. Wortley, damaged.
Sorel, Que.—Robert De Richelieu Parish Church destroyed.
Hartford, Conn.—Bldg., 561 Main St., damaged; Van Dyke Coffee House damaged; Poultry Farm Market, Hartford Bonding & Insurance Service Co., Barber Shop of F. J. Uricchio, W. J. White Real Estate,, and Dr. W. J. Mitchell, damaged.
Moline, Ill.—Electrical appliance store of Leithnew and Welsher damaged.
Rock Island, Ill.—Central Junior High School destroyed.
Houlton, Me.—Putnam Bros. Co., Petroleum Products garage and whse., damaged.
Florham Park, N. J.—Clubhouse of Braidburn Country Club destroyed.
Union City, N. J.—Entire block-long amusement center, occupied by 32 bowling alleys, restaurant, table-tennis room and bar, damaged.
Bandon, Ore.—Ten units at Dew Valley Auto Court destroyed. Explosion.
Knoxville, Tenn.—Daylight Bldg., occupied by Western Auto Supply Co., National Cash Register Co., Remington Rand Co., Railway Express Co. and Roos Tailoring School, damaged.
Amboy, Wash.—Bracey-Neal Sawmill destroyed.
Chatham, Ont.—Wholesale Brewers' whse. destroyed.
Quebec, Que.—St. Jean Baptiste Orphanage damaged. Oil heater broke.
Leland, Miss.—Cotton gin destroyed.
Webster Groves, Mo.—Webster News-Times plt. damaged.
Clayton, Mo.—Rebent Park Apts. damaged.
Santa Paula, Cal.—Glen City Theatre damaged.
Holly Springs, Miss.—Bldg. occupied by theatre destroyed. Adj. store destroyed.
Portsmouth, N. H.—Mal's Hotel destroyed.
Painesville, Ohio—Apt. bldg. destroyed.
Oliver Springs, Tenn.—Oliver Springs elementary school destroyed. Defective electrical wiring.
San Marco, Tex.—John Clark Industries damaged. Oil line ignited.
Renton, Wash.—China Clipper Restaurant, Renton Florists, Henderson Pharmacy, contents, destroyed. Explosion.
Hope, Ark.—Graydon Anthony Lumber Co. destroyed.
Sapula, Okla.—Hotel and adj. bldgs. damaged.
Norman, Okla.—Univ. of Oklahoma men's dormitory destroyed.
Sherman, Tex.—Kimball oil mill whse. damaged.
Walla Walla, Wash.—Walla Walla Lumber Co. damaged.
Nordegg, Alta.—No. 5 Briquetting Plt. of Brazeau Collieries destroyed.
Pueblo, Colo.—Local pharmacy damaged.
Crown Point, Ind.—Metcalf Drug Store and Commercial Bank damaged.
Roselle, N. J.—First Presbyterian Church damaged.
Chester, Pa.—Annex of Glenmore Hotel Resort, Orange County Town., damaged.
Charlotte, N. C.—Ebenezer Baptist Church destroyed.
Philadelphia, Pa.—Quality Laundry damaged. Dwellings of George Poole and William Bell damaged.

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Standard since 1879

THE BEST BADGE MONEY CAN BUY

STANDARD WITH FIREMEN EVERYWHERE. SUPPLIED IN NICKEL, CHROME, GOLD PLATE AND ROLLED GOLD.

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President

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FLEECE LINED
RUBBER COATS & PANTS
Resist acid, grease and oils—priced right! Sample garment on request for 30 days. Backed by 32 years' experience in making fine rubber garments for the fire service.

ALB RUBBER COMPANY
366 Somerville Ave., Somerville, Mass.

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THERE'S NOTHING "JUST AS GOOD"

The fire service prides itself on buying "the best," everytime. *INSIST on ATLAS*—everytime—and you'll get the best life net!

ATLAS LIFE NETS

ATLAS SAFETY EQUIPMENT CO., INC.
27 WARREN ST. NEW YORK 7, N. Y.

Toronto, Ont.—Canadian Food Products whse. destroyed.
Montreal, Que.—Mid-Day Fluorescent Lighting Co. destroyed.
Middletown, Del.—Chicken brooder house on Gander Hill Poultry Farm, three miles east, destroyed.
Lowell, Mass.—Elliott's dept. store and Quinn Stove & Appliance Corp. damaged.
Dayton, Ohio—Stachler Cleaners damaged.
New Philadelphia, Pa.—Lyric theatre, moving picture show bldg., destroyed.
Lexington, Va.—Stuart Bldg., occupied by Adair-Hutton Dept. Store and Ed Deaver & Son men's clothing store, destroyed. Adj. McCrum Bldg., occupied by McCrum's Drug store, Sanitary Market, Greyhound Bus Lines, Tolley's Hardware Co. and offices, damaged.
Sebastobol, Cal.—Garcia & O'Connell Dehydrating Co. plt., Souza's Corners, four miles north, destroyed.
Florence, Colo.—Blunt bldg., occupied by Johnny's bar, Coney Island Cafe, Claude Bown real estate office, M. M. Decker electric shop, offices, beauty shop and several apts., destroyed. Adj. Senatore dept. store and bldg. occupied by Brunswick pool hall, damaged.
Butler, Ga.—Brazemore's dept. store destroyed; W. H. Trussel's grocery and vacant bldg. adj., damaged.
Grinnell, Ia.—Bldg. occupied by furniture store of Charles McCall and John R. Queen, damaged.
Sioux City, Ia.—Swift & Co. packing plt. destroyed by explosion.
Birmingham, Mich.—Mother & Son Antique Shop destroyed.
Little Falls, Minn.—Larson Boat Works destroyed.
Cleveland, Ohio—Historic Central Market destroyed; four-story Glenville Paper Co. damaged.
Los Angeles, Cal.—Long Beach Bldg. occupied by Bonner Machine Works Corp., Stylon Corp., vending machines, and Lloyd Furniture Repair Co.
Millsboro, Dela.—Frank S. Parker Paving Block Co. destroyed.
Golden, Ill.—King Business Bldg. damaged.
Vincennes, Ind.—Business block, occupied by Wesley Tumey Tavern, Wife-Saver Appliance Store, Fair Store, destroyed; Indiana Auto Supply Store, U. G. Case Paint & Wallpaper store damaged.
Niagara Falls, N. Y.—Suspension bridge passenger station of New York Central Railroad, occupied by ticket offices, waiting room, baggage room, restaurant and apt., destroyed.
Greenville, N. C.—McGowen tobacco whse. destroyed.
Louisburg, N. C.—Franklin Hotel with two law offices, two stores and a funeral home damaged.
Steubenville, Ohio—Business establishment damaged.
Stratford, Conn.—Hangar at Bridgeport Municipal Airport damaged.
Dubuque, Ia.—Klauer Mfg. Co. plt., lumber boxing and crating, patterns and parts for snow removal machines, damaged. Defective chimney.
Grand Rapids, Mich.—Frost-Pack Distributing Co. plt., Wyoming Township, Kent County, destroyed.
Portland, Mich.—Barn of Brokaw farm, five miles east, destroyed.
Skeston, Mo.—Oil plt. of Ferrell Fuel & Coal Co. destroyed. Three 10,000-gallon gasoline tanks exploded.
Rockford, Wash.—Foote Hotel Tavern, contents, destroyed.
Woodland, Cal.—The Maples, Yolo Country showplace, destroyed.
Michigan City, Ind.—Springfield Township High School damaged.
Culbertson, Neb.—George Hein hardware and implement company store destroyed.
Hudson, N. C.—Hudson Furniture Mfg. Co. plt. destroyed.
Hyndman, Pa.—Post Office, bank, twelve other bldgs., destroyed. Christmas tree.
Wiley City, Wash.—Bennington Block Grocery, tavern, destroyed. Hot water heater.
Ayr, Ont.—Bldg. of Ayr District Co-Operative destroyed.
Maple, Ont.—Farm home of Charles Hemstead destroyed.
St. Catherines, Ont.—Burroughs Furniture Store damaged. Bldg. also occupied by Stokes Seed Co., mail order office of R. Simpson Co. and law offices.
Ste. Dorothee, Que.—Rectory and garage attached to Roman Catholic Parish Church, destroyed.
Evergreen, Ala.—Six business establishments destroyed; two others damaged.
Atkin, Minn.—MacGregor Dennerly Hotel destroyed.
Alden, N. Y.—Empire State Hotel and Black Water Baths, Inc., damaged.
LaMoyne, Ohio—Farmers' Exchange Elevator destroyed.
Painesville, Ohio—Dwelling and apts. of the Riverside Apts. damaged.
Richmond, Va.—Southern Junk & Salvage Co., Inc., cabinet making firm of John Dennis and automotive parts firm of Russell Wells, destroyed.

FOR FOREST FIRE FIGHTING

COMBINATION BRASS NOZZLE FOR 50 FOOT STREAM OR LONG COARSE SPRAY
COMBINATION BRASS NOZZLE FOR CARRYING TANK AND FOR HOLDING PUMP
EXTRA HEAVY TANK IS FORM FITTING TO FIT BACK SNUG AND FIRM
ALL TANK JOINTS LOCKED AND SOLDERED
BUILT STRONG
FORM-FITTING, VENTILATED SHIELD GIVES A CONSTANT CIRCULATION OF AIR BETWEEN WATER TANK AND CARRIER'S BACK. IT PROTECTS THE BACK FROM THE COLD WATER AND MOISTURE IN THE TANK AND KEEPS THE BACK WARM AND DRY.

Wardens, Rangers, Municipal, Volunteer, Industrial Fire Companies and other fire fighting units—this has been a forest fire year.

BE PREPARED: Immediate delivery on the following: Indian Fire Pumps shown above (90-G Galvanized, 90-B Brass), Drench, Portable Pumps, Smoke Masks, Forestry Fire Hose and other fire fighting equipment.

Write for new catalog, Dept. F-E.

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19-21 Beekman St., New York

Floodlighting
WHERE YOU NEED IT!

EASILY CARRIED
Lightweight and compact, Onan Electric Plants can be hurried to the spot where needed. Supply current for floodlights, electric saws, drills and other tools. Always ready for instant use.

FIT INTO SMALL SPACE
Compact, self-contained Onan Electric plants can be ordered as standard equipment with many makes of new fire trucks. Just a few square inches of mounting space required for installation on old trucks.

Write for **FREE** *Folder!*

New folder shows many lightweight models for fire department use. D.C.: 1200 to 5,000 watts. A.C.: 350 to 3,000 watts. Large plants for emergency operation of signal systems to 35,000 watts.

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WARNING LIGHT

The popular service light. Especially effective when used in pairs. No need to remove upholstery for roof mounting.

6" diameter polished shell with chrome trim, SILVER-PLATED REFLECTOR, built-in flasher.

Choice of stock Plexiglas lenses.

WL $12.00

ARGUSLITE CO.

BLUE RIDGE SUMMIT, PENNA.

Richmond, Va.—Richmond Woodworking Corp. destroyed.
Ottawa, Ont.—Cameron block housing the Sugar Bowl Restaurant, liquor control board store and three other firms, gutted.
Santa Rosa, Cal.—Poultry producers of Central California, damaged.
Torrington, Conn.—The Alhambra Theatre, damaged.
Wilmington, Dela.—Vicmead Hunt Club, near Centerville, damaged.
Philadelphia, Pa.—Factory bldg. occupied by rug cleaning plt. of Haig M. Nakeshian and Little Bitty Frocks, destroyed.
Sauk City, Wis.—Grabill's dept. store, Kroger's grocery store, damaged.
Winnipeg, Man.—The Wanwanesa Flour and Grist Mill, damaged.
Tampa, Fla.—Upholstering dept. of Ware Bedding & Mfg. Co., Hookers Point, damaged.
Noblesville, Ind.—Indiana Condensed Milk Co. plt., destroyed.
Boston, Mass.—Norwegian Freighter Fernbay, damaged.
St. Louis, Mo.—Flotken's Thirty-ninth Street Super Market, damaged.
Culbertson, Neb.—Business bldg. occupied by George Hein Hardware & Implement Co., damaged.
Plainfield, N. J.—Blue Hills Plantation, restaurant, Green Brook Township, destroyed.
Coos Bay, Ore.—Coos Bay Logging plt., North Bend, destroyed. Short circuit.
Scranton, Pa.—H. J. Cokely plt. destroyed.
Wake Forest, S. C.—Loading shed and platform of W. W. Holding Co., destroyed.
Cathlamet, Wash.—Cathlamet Tavern, sporting goods store, destroyed.
Bluefield, W. Va.—Dwelling of Robert Dudley, destroyed.
Cortez, Colo.—Main bldg. of Wark Milling Co., damaged.
Price, Utah—The Price Fruit Market, destroyed. Overheated coal heater.
Easton, Pa.—Diamond Slate Co. plt. damaged.

Four Baltimore Firemen Killed in Apparatus Crash

Every man aboard each of two pieces of Baltimore fire apparatus was either killed or injured, on Nov. 9, in a collision while en route to an insignificant brush fire at Glen and Key Avenues, that city.

The accident, reported the worst of its kind in the history of the Fire Department, came at the intersection of Park Heights and Rogers Avenues, not far from the Maryland Jockey Club. The alarm on which the companies were responding came from a box at Rockwood and Ney Avenues.

The two fire department units, Ladder 22 and Engine 46, left their houses shortly after 3:00 P.M. with four men on each piece. Ladder 22 responded north on Park Heights Avenue and Engine 46 proceeded north on Reistertown Road and turned east on Rogers Avenue. The sirens on both trucks were being sounded as they approached the corner of Park Heights and Rogers Avenues.

A patrolman, John W. Stiegler, on special traffic detail at the intersection, was engaged in shepherding some 20 school children from a school bus, across the thoroughfare, when he heard the siren of Ladder 22 coming up Park Heights Avenue. As he hurried the youngsters onto the sidewalk, he heard the warning signal of Engine 46 approaching east on Rogers Avenue.

Stiegler gauged that both trucks would reach the intersection at about the same time and hurried into the center of the intersection and endeavored to signal the pumper to a stop, because he estimated the ladder truck was traveling at a faster speed and he believed it had the right of way.

In some unknown way, the driver of the pumper either failed to heed the patrolman's signals, or became confused over them, because he did not check speed. Stiegler barely leaped to safety before the two heavy vehicles crashed together.

Following the impact, the pumper careened about 50 feet to run into the rear

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DRY CHEMICAL FIRE EXTINGUISHER

EASIER TO HANDLE — lighter in weight by 7 to 15 lbs.

FASTER IN ACTION — 10' x 10' pit of blazing gas and oil *all out* in seconds.

PENETRATES CREVICES—completely blankets wide area.

ELIMINATES RE-IGNITION—works in winds and drafts.

NON-TOXIC, NON-CORROSIVE — harmless to everything but fire—including food.

SAFE ON ELECTRICAL FIRES—non-conductive.

FAN SHAPED NOZZLE — ejects flat stream; screens off flame from burning material; safeguards operator.

Only "ALL-OUT" gives *all out* protection. Demonstration anywhere, anytime. Write today for illustrated data.
Model A-16 illustrated, has 15 lb. capacity Model B-10 contains 10 lbs of dry chemical.

Protects the operator as it kills the fire.

Distributors' inquiries invited.

ALL-OUT MFG. CORP.
2 PARK AVENUE, NEW YORK 16, N. Y.

Rate $6 per inch less 10% for three or more consecutive insertions.

Classified Advertisements

Closing date for copy 25th of month preceding date of issue.

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5-lb. CO-2 type extgr., squeeze grip valve.	$29.00
15-lb. CO-2 type extgr., squeeze grip valve. (Free Truck Bracket with orders for Two)	$55.00
Unlined black rubber regulation coats, ea.	$11.00
Lined, Black, Red, White Reg. Coats, ea.	$18.00
6" Sirenlite, chromed, flat base	$37.50
Same with Red or Black Finish. Swell Sirens	$31.00
4½" Sirenlite, chrome, flat base	$24.95
6" Sealbeam Hose Light, 6" Red Flasher Rear, has 3-spring loaded wing nuts, doesn't Loosen Up	$21.50
6# Clear handle, pick head axe	$6.25
Scabbard and Spring Tulip Mounting, side	$7.25
Super Fog Guns, chrome, finest made	$49.75
2½-gal. Soda Acid Extgrs. (new), complete	$19.50
2½-gal. Foam, with charge (Not FD Type)	$31.50
Smoke Generators, for testing and drills, ea.	$4.50
30-min. Red Flares, dz. $4.00. Case of 36	$11.00
Linen Fire Hose (new, any length), per ft.	$0.44
Leaderline Gated Y, 2½ x 1½ x 1½, chrome handles	$28.50
Water Thief, 2½ x 1½ x 2½ x 1½, chrome handles	$89.50
2½" Shutoff Nozzle, playpipe, hook, tip, chrome	$52.00
Same, with 1½" threaded tip, leather handles	$56.00
2½" Quick Off, mounting plate, Triloc, chrome	$8.35
Acme Canister smoke mask, complete with spare	$44.50
Spare Canisters, 2-hour type	$6.00
2½" Koroseal Washers, per dozen	$2.00
1½" Koroseal Washers, per dozen	$1.60
1" Koroseal Washers, per dozen	$1.40
4" Koroseal, doz $5.60; 4½", doz. $5.50; 5", doz.	$6.00
700A Big Beam, complete batteries and Bracket	$23.00
Arguslite, 7½-volt Battery, Bracket	$21.50
Chimfex, box of 4, $4.00; case of 24	$22.50
Steel Boot Inersoles, order same size as boot	$1.00
Regulation Felt Lined Boots, to size 12	$11.95
Rubber Firemen's Mittens, swell for winter, pr.	$2.00

Quotations submitted on any fire equipment items.

DORAY FIRE EQUIPMENT CO.
1924 Valley Dr., Syracuse, N. Y.

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Wanted to buy used hand operated aerial fire truck.

C. L. DELONG
Nebraska City, Nebraska

ATTENTION: FIRE FIGHTERS

You can now replace your ordinary door bell button with an attractive and realistic miniature fire alarm box. Workable button in center rings door bell. Price: $1.00—cash, check or money order. Send today. Also model apparatus.

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10 ft. lengths hard rubber suction 4½ inch brass N.S.T. Per length	$25.00
Roof Ladders	$20.00
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2½ x 2½ x 2½ one capped NST	$2.00
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2½ NST Nozzle	$1.00
4½ x 2½ NST double female pumper, hydrant connection	$3.50

Shipping charges prepaid on orders of $5.00 or over

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Unused Government Surplus, 100% Waterproof. With Removable, All Wool Blanket Lining. Rust-Proof Buckles. Coat is Durable, and easy to work with. Really Worth $22.00. Sizes 42-44. Price only $14.95 each. For Circular write:

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WANTED

Self-propelled, 65 foot water tower. Must be from within the continental United States.

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WANTED

Dealer—Distributors to sell fire apparatus manufactured by well-known Factory. Also popular line of high grade fire hose. Prompt Delivery. Attractive proposition. Address Box 15, c/o FIRE ENGINEERING, 24 West 40th St., New York 18, N. Y.

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POSITION WANTED

Fire Inspection, Protection or Prevention in Municipal Dept. or Industrial Plant. Age 31, 11 years experience in fire fighting Inspection work. Former U. S. Civil Service Capt. in Structural and Crash fire fighting. Present civil service grade of 99 for Fire Captain. Former U. S. Navy Fire Instructor. Also large Municipal and War Plant experience. Thorough knowledge in training programs and other technical works in the fire field. Extensive study from the books of N.F.P.A., N.B.F.U., Oklahoma A & M, Fire Engineering and other Fred Shepperd books. Good Reference. Write to Box 120, c/o FIRE ENGINEERING, 24 West 40th Street, New York 18, N. Y.

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New

Only $19.50 per 50' Length
2½" x 50 Ft. Cotton Rubber Lined
Single Jacket 300 lb. Test
Coupled complete NST

TOWSON HOSE & RUBBER CO.
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FOR SALE

One 1926 American La-France City Service Hook and Ladder Truck. Early 1950 delivery. Full complement of ladders to 50 ft., extinguishers, hand tools, etc. Excellent appearance. If interested, communicate with A. P. Smith, Town Clerk, Boonton, New Jersey.

WANTED

Fire Chief, 30 years experience, under 50, good health. Seeks position as Fire Officer or Drillmaster. Excellent references. Salary or location no object. Write to Box 125, c/o FIRE ENGINEERING, 24 West 40th Street, New York 18, N. Y.

FOR SALE

1925 Ahrens Fox 750 Gallon Pumper with pneumatic tires; excellent condition. Bids to be received by the Board of Fire Commissioners by February 15, 1950, to be opened and read in public at regular meeting of the Board of Fire Commissioners on Thursday, February 16, 1950 at 8 P.M.

The Board of Fire Commissioners, Fire District No. 1, Township of Ocean, N. J., reserves the right to reject any or all bids if deemed to the best interests of the Township to do so.

For further information write to: MR. J. RUSSELL HIBBETS, SEC. BOARD OF FIRE COMMISSIONERS, FIRE DISTRICT NO. 1, Ocean Township, Oakhurst, N. J.

WANT EXCLUSIVE ON WEST COAST

20 years' experience sales and service municipal and rural fire apparatus and equipment in eleven western states. Headquarters in San Francisco. Top notch outlets in key cities. Want exclusive on West Coast distribution. What have you? Write to Box 115, c/o FIRE ENGINEERING, 24 West 40th Street, New York 18, N. Y.

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INDEX FOR 1949

The index, covering the twelve issues of Fire Engineering for 1949 is now ready for distribution.

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of a parked car. The ladder truck caromed into a steel light pole. All but one of the eight men riding the two vehicles were thrown from their positions with the impact. Two were killed instantly and two died shortly after reaching the hospital.

The dead are: Joseph A. Remekis, 35, driver of Ladder 22, who was pinned in his truck when it struck the pole. It was necessary to cut him loose with a torch; Charles Paff, 57, thrown from Engine 46; James W. Haynie, 26, also thrown from the pumper; and Joseph B. Magaha, 25, who was catapulted from the ladder truck. Injured were William Flanigan, 40, Engine 46, multiple lacerations, fractured leg and internal injuries; Harry Burke, 58, Ladder 22, fractured skull and other fractures, condition critical; Joseph H. Greiser, Engine 46, multiple fractures both legs, other fractures and possible internal injuries, condition critical; Kenneth Medley, 32, Ladder 22, shock and internal injuries, least seriously injured of the casualties.

Fireman Medley said he heard and saw the pumper approaching and although he braced himself on the running board of the truck, he was thrown against the turntable with the crash, and bounced off into the street. He got to his feet and staggered into the drug store on the corner, where he telephoned for ambulances.

Three of the injured men were thrown onto the grass lawn at 5501 Park Heights Avenue and a fourth was flung onto the concrete approach to the front door.

A pharmacist, Lewis Taich, employed by the drug store, and others who witnessed the crash, administered first aid. Ambulances began to arrive about fifteen minutes after the collision. West Baltimore Hospital, meanwhile, had been alerted to receive the casualties and special details of doctors and nurses worked over the injured and dying as rapidly as they were received.

According to Fire Department officials, both pieces of apparatus were following a "generally outlined route" in response to the alarm. In Baltimore, according to P. W. Wilkinson, secretary of the Board of Fire Commissioners, movement of apparatus responding to corner box alarms is not governed by any kind of "hard and fast rule," changing traffic conditions making it impossible to dispatch fire apparatus on fixed routes. An investigation into the collision was immediately instituted.

A routine inspection trip is said to have saved the life of Lieut. Leo. V. Curran, regularly attached to Engine 46. He was out of quarters when the alarm was received and the acting officer in charge of the company was Fireman Charles Paff, who rode beside the driver in the seat the Lieutenant would otherwise have occupied.

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(F. E. Boren, Chief, Fire Dept., Silver City, N. M.)

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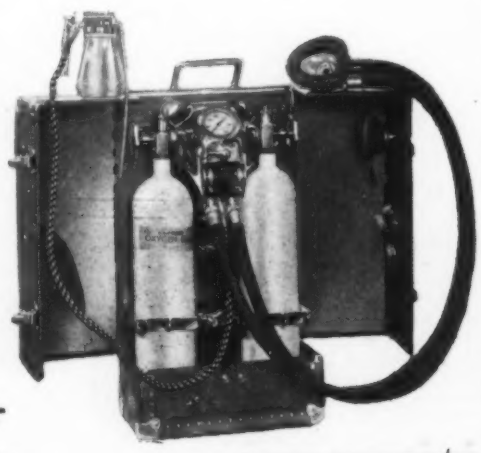

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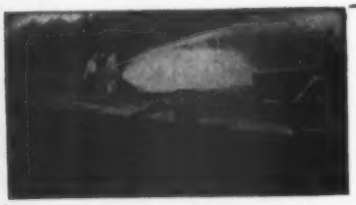

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ADVERTISING INDEX

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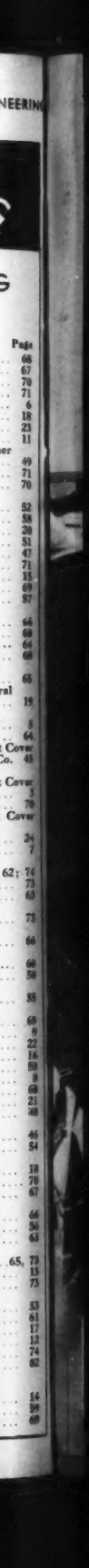
	Page
Acme Protection Equipment Co.	68
Akron Brass Mfg. Co., Inc.	67
ALB Rubber Co.	70
All-Out Mfg. Corp.	71
Aluminum Ladder Co.	6
American District Telegraph Co.	18
American Fire Apparatus Co.	23
American-LaFrance-Foamite Corp.	11
Ansul Chemical Co., Fire Extinguisher Div.	49
Arguslite Co.	71
Atlas Safety Equipment Co., Inc.	70
B & M Siren Mfg. Co.	52
Bar-Way Mfg. Co.	58
Bean Mfg. Co., John	20
Bi Lateral Fire Hose Co.	51
Blackinton & Co., Inc., V. H.	47
Body Guard Mfg. Co.	71
Boston Woven Hose & Rubber Co.	15
Braxmar Co., C. G.	69
Briggs & Stratton Corp.	57
Cairns & Bro.	66
Carpenter Manufacturing Co.	60
Central Fire Truck Corp.	64
Circul-Air Corp.	60
Darley & Co., W. S.	65
Detroit Diesel Engine Div. of General Motors	19
E and J Manufacturing Co.	3
Elkhart Brass Mfg. Co., Inc.	64
Emerson Co., J. H.	Inside Front Cover
Eureka Fire Hose Div., U. S. Rubber Co.	48
Fabric Fire Hose Co.	Inside Back Cover
Federal Enterprises, Inc.	5
Fire-End Products	70
Four Wheel Drive Auto Co.	Back Cover
Gamewell Co.	24
Goodrich Co., B. F.	7
Hale Fire Pump Co.	62; 74
Halprin Supply Co.	73
Howe Fire Apparatus Co.	63
International Bronze Tablet Co., Inc.	73
Janesville Apparel Co.	66
Kim Hotstart Mfg. Co.	60
Kohler Co.	50
Leece-Neville Co.	53
McIntire Brass Works, F. N.	69
Mack Mfg. Corp.	9
Mars Signal Light Co.	22
Maxim Motor Co.	16
Metcalf Bros.	58
Midwestern Mfg. Co.	8
Morning Pride Mfg. Co.	60
Motorola, Inc., Communications Div.	21
Myers & Brothers Co., F. E.	48
National Foams Systems, Inc.	46
Niedner's Sons Co., Inc., Charles	54
Oberdorfer Foundries, Inc.	10
Onan & Sons, Inc., D. W.	70
Oren Roanoke Corp.	67
Pacific Marine Supply Co.	66
Plasticote Glove Co., Inc.	56
Powhatan Brass & Iron Works	65
Randolph Laboratories, Inc.	65, 73
Rockwood Sprinkler Co.	13
Russell Uniform Co.	73
Safety First Co.	53
Scott Aviation Corp.	61
Smith & Co., D. B.	17
Smith, Inc., L. B.	12
Stephenson Corp.	74
Sterling Siren Fire Alarm Co., Inc.	62
Ward Products Corp., Div. of Gabriel Co.	14
Waterous Company	59
Wentworth-Forman Co., Inc.	69